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THESIS

**ANALYSIS OF NAVAL ORGANIZATIONS WITHIN
MARITIME NATIONAL INTERESTS: THE CASE OF
COLOMBIA**

by

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June 1997

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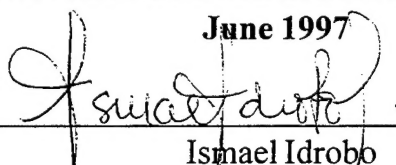
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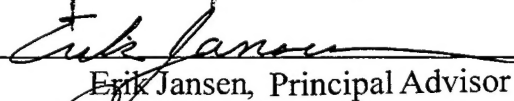
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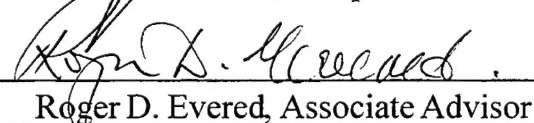
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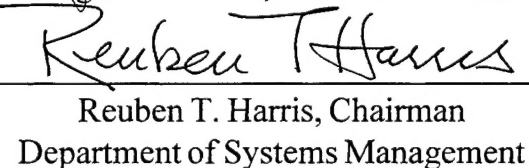
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ABSTRACT

This thesis examines the Colombian Maritime Authority and the Colombian Coast Guard Service using relevant constructs from strategic management and organizational theory. The research uses the Nuechterlein matrix concepts in basic national interests combined with the results of a survey to analyze the maritime mentality of Colombia. The thesis applies a Dynamic Systems Model and finds that common parameters are used in maritime organizations to manage maritime activities.

The study draws on comparative analysis of the contexts and organizational designs of foreign maritime organizations. Results indicate that Colombia does not include maritime national interests in its priorities of national interests. Survey results suggest that Colombia's management of maritime activities has only partially developed due to the complexity of the Nation-State's political and cultural environment. The study also identifies overlapping functions and redundant efforts within the two Colombian organizations. It explores the possibility and likely consequences of restructuring the two organizations, given Colombian maritime national interests and thus provides alternatives to maximize the management of maritime activities. Recommendations for further research are included.

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I. INTRODUCTION

First was the sea. Everything was dark.
There was no sun, moon, people, animal, nor plants.
The sea was everywhere.
The sea was the mother.
The mother was not people, nor nothing, nor anything.
She was the spirit of what was to come, she was vision and memories.

Kogui Mythology¹

These mythological expressions from a Colombian ancestral tribe describe the sea as an element in the origins of life. The words also suggest an unbreakable bond between future generations and the sea. Through many centuries the sea has been a constant challenge for nations and individuals. History reveals that the sea is one of the most important elements in the development of humankind. Many nations have fought for control of the sea. Economic prosperity and the future course of many nations are dependent on the sea. There is a consistent scenario where a nation develops economic maritime activities and at the same time expands its sea power. For Colombia this is the challenge and in the terms of Kogui's mythology, "the spirit of what was to come."

This study examines the Colombian Maritime Authority and the Colombian Coast Guard Service using relevant constructs from strategic management and organizational theory. The thesis presents a comparative analysis of both the contexts and organizational designs of maritime organizations. The analysis focuses on the Colombian Coast Guard and Maritime Authority includes the origins of the Coast Guards of several other nations. The study identifies overlapping functions and redundant efforts within the two Colombian organizations responsible for the management of maritime activities. In light of the analysis of the other nations' maritime organizations, it explores the likely consequences of restructuring the two Colombian organizations. The results of this research study may

¹ These words are found in the Colombian Gold Museum. Property of the "Banco de la República," Santafé de Bogotá.

assist policy makers by identifying the decision-making elements relevant to an evaluation of possible improvements in the management of maritime activities.

A. BACKGROUND

The Colombian Navy began a period of restructuring and modernizing following the direction given by the last two elected Presidents (periods 1990/94 and 1994/98). Over the past six years the increasing levels of violence in Colombia have affected the well being of the nation. A national strategy against violence was initiated to regain social peace. Two Presidential Directives² were signed to enable Colombia to fulfill the objectives proposed in the national strategy against violence. The Navy received orders to activate the Coast Guard Service, which was originally established by a 1979 law.

Law No. 1874 was signed on August 2, 1979 and created a Coast Guard Service dependent upon the Navy. The Colombian Coast Guard was assigned surveillance and defense tasks to enable the Colombian Nation to explore, exploit, preserve and administer economic and non-economic sea resources.³ To meet the objective of this law and the national strategy against violence, an essential requirement was to begin operation as quickly as possible.

During this process of creating the Coast Guard, Navy planners studied and consulted with various other Coast Guard Services. The largest foreign services studied were the United States Coast Guard Service, Japanese's Maritime Safety Agency and the Chilean Maritime Territorial Agency. The United States Coast Guard Service has more than 200 years of experience; Japanese's Maritime Safety Agency has a great reputation in port activity control; and the Chilean Maritime Territorial Agency is a highly regarded South American Service with experience in maritime traffic control.

² Presidential Directive No. 5, "Responsibilities of State entities in the execution of the National Strategy against Violence." Signed by President Gaviria on the 28 December, 1991. Presidential Directive No. 3, "Security for the People. Responsibilities of State entities in the execution of the second phase of the National Strategy against violence." Signed by President Samper on 3 May, 1994.

³ Law No. 10, 1978, Articles Number 8 and 10.

During the activation of the Colombian Coast Guard Service, some Navy planners recommended fusing the service with the Colombian Maritime Authority so that the maritime functions of maritime safety, maritime law enforcement, marine environmental protection, maritime development plans, and regional and international security problems would be the responsibility of one organization. Navy Headquarters considered this proposal inconvenient because of the immediate requirement for a Coast Guard Service. Headquarters believed that the requirement could be more quickly accomplished within the Navy's traditional command structure.⁴

On November 6, 1991, the Colombian Coast Guard Service was activated with an approved table of organization and equipment provided by Naval Headquarters.⁵ Five years later the Ministry of Defense approved the organization of the Coast Guard.⁶

B. OBJECTIVES

The objective of this study is to analyze the present organization of the Colombian Maritime Authority and the Coast Guard Service within the context of Colombia's national and maritime interests in order to determine if this is the most effective organization for the management of maritime activities.

C. THE RESEARCH QUESTION

The primary research question in this study is, Would restructuring the Colombian Maritime Authority and Coast Guard Service improve the management of maritime activities within Colombia's maritime national interests? Before answering the primary question it is necessary to address the following supporting questions: What kind of

⁴ The author was assigned as Head of the Department of Operations and Maritime Safety during the planning and activating process.

⁵ Disposition No. 010 of Naval Headquarters, signed by Admiral Gustavo Angel on 6 November, 1991.

⁶ Res. No. 4989, "Ministry of Defense approves Disposition No. 001, dated 19 January 1996, by which Units and Establishments of the Navy are organized." Signed by Minister Esguerra.

organizational design characterizes the two organizations? Do the Colombian Maritime Authority and Coast Guard Service overlap in their functions? In the case of foreign services, why is the maritime authority and Coast Guard Service combined? What benefits or disadvantages would result from the restructuring the two Colombian organizations? Would restructuring the two organizations enhance the strategic management of Colombian maritime national interests?

D. METHODOLOGY

This study employs multiple research methods. First a survey research methodology was used. Questionnaires were sent to active and retired naval Flag Officers and active duty Captains in Colombia to qualify the maritime ideology of Colombia. Second, in order to define variables for the study, the author used definitions, basic theory and research related to the existence of a Nation-State and the elements required to maintain its subsistence in relation to the management of maritime national interests. Last, a comparative analysis is conducted using the concepts of the Nuechterlein matrix, a dynamic system model, and relevant constructs from strategic management and organizational theory. The thesis identifies common patterns used in the management of maritime activities.

E. ORGANIZATION OF THE STUDY

The study is organized to address the research question and the supporting questions. Chapter II provides basic concepts and theory regarding national interests. This chapter should assist the reader in understanding how national interests influence maritime national concerns. Chapter II is divided into two sections. The first section develops the theory of national interests and the second section describes how a Nation-State can establish maritime national interests based on the prioritization of those interests. Chapter III analyzes the Colombian Maritime Authority and Coast Guard Service within their organizational frames. It identifies similar and overlapping functions. Chapter III also discusses the results of the questionnaire. Chapter IV describes the organizations and

backgrounds of the Maritime Authorities and Coast Guard Services of Chile, Japan and the United States of America, given their maritime national interests. Variables that affect the organizational structure of the foreign services are analyzed. Common variables and patterns found in the foreign and Colombian organizations are described.

Finally Chapter V presents the conclusions of this study. Chapter V also suggests a possible outline of courses of actions for future decision making, and for the improvement of strategic management of maritime activities in Colombia.

F. LIMITATIONS OF THE STUDY

The study is limited to conducting an analysis and finding common parameters that experienced maritime organizations use in managing maritime activities. This management is assumed to be within their maritime national interests and the context of the international system. With the research methods employed, this study does not attempt to develop a perfect mechanism to decide the organization requirements nor the legal changes necessary to manage Colombia's maritime activities. The study only intends to suggest means by which maritime national interests can be established and highlights common parameters used by organizations to manage the maritime activities of a Nation-State.

II. NATIONAL INTERESTS

Many scholars define national interests as an instrument of both political analysis and political actions. They relate national interest to the needs of a sovereign state embracing its external environment. When used in political analysis, national interest is employed to evaluate and define sources of foreign policy. When used as a political action mechanism, national interest is a component in the international agenda of a nation.⁷

Policy makers and leaders associate national interests with the individual trilogy of "life, liberty and property." This is more clearly defined as the physical survival of the nation and the freedom and economic subsistence of its people.⁸ In the context of defense, economics, and culture, national interests determine a Nation-State's international agenda. Countries combine these ideas with their internal needs and political vision to realize the Nation-State objective of support for its national interests.

A. BASIC NATIONAL INTERESTS

The foreign policy of a country is formulated based on the well-being of the Nation-State. Neuchterlein⁹ presents the following basic interests to give planners and leaders a guide for foreign policy formulation:

- **Defense Homeland Interests:** These interests are defined as the protection of individuals and the Nation-State from external aggression and/or externally planned threats to that nation's system of government.
- **Economic Well-being Interests:** These interests are defined as those affecting growth of the Nation-State's prosperity in relation to the international system.

⁷ *International Encyclopedia of the Social Science*, Volume II, Crowell Collier and Macmillan Inc., 1968, p. 34.

⁸ Luciano Tomassini, *La Política Internacional en un Mundo Postmoderno*, RIAL Grupo Editor Latinoamericano, 1991, p. 250.

⁹ Donald E. Neuchterlein, *National Interests and Presidential Leadership: The Setting of Priorities*, Boulder, Colorado: Westview Press, 1978, p. 4.

- **Favorable World Order Interests:** These interests preserve the political and economic system within the international environment and assure the Nation-State and its citizens of peaceful trade outside that nation's frontiers.
- **Ideological Interests:** These interests preserve the values that the citizens of the Nation-State share and believe are universally good.¹⁰

Once a Nation-State identifies its basic national interests, Hans J. Morgenthau says:

The essence of international politics is identical with its domestic counterpart. Both domestic and international politics are some struggles for power, modified only by the different conditions under which this struggle takes place in the domestic and international spheres.¹¹

Thus, power is used, in a positive way, to protect or motivate the interests of a nation.¹² Essentially power interests rely on concerns regarding external threats and internal actions to influence the decisions of the Nation-State, thus determining the priorities of national interests.

B. IMPORTANCE OF NATIONAL INTERESTS

Nuechterlein combines basic national interests with four additional issues of a Nation-State in his analysis. These four issues are ranked in a scale of "priorities of interest" using the following definitions:

- **Survival Issues:** This is where "the very existence of a Nation-State is in jeopardy"¹³ and results in military confrontations on the nation's own territory or imminent attack if these issues are denied resolution.
- **Vital Issues:** This is where "serious harm will very likely result to the state unless strong measures, including the use of conventional military forces.

¹⁰ Ibid., p. 5.

¹¹ Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, Fifth Edition, New York: Knopf Inc., 1973, p. 35.

¹² Robert A. Dahl, *Modern Political Analysis*, New Jersey: Prentice-Hall, 1991, p. 27-34.

¹³ Nuechterlein, Ibid., p. 9.

are employed to counter an adverse action by another state or to deter it from undertaking a serious provocation.”¹⁴ The factor that differs from survival issues is that vital issues usually provide time for the Nation-State to seek alliances or to negotiate or apply pressure to the adversary by political, economic or military means.

- **Major Issues:** This is where “a state’s political, economic, and ideological well-being may be adversely affected by events and trends in the international environment and thus requires corrective action in order to prevent them becoming serious threats (vital issues).”¹⁵ Usually major issues are under the umbrella of the international system and are dealt with in diplomatic negotiations.
- **Peripheral Issues:** This is where “a state’s well-being is not adversely affected, but when the interests of private citizens and companies operating in other countries may be endangered.”¹⁶ Multinational companies and investments are considered under these issues. In dealing with these issues, a Nation-State may also use diplomatic negotiations.

As an example of this scale, the invasion of the Malvinas/Falkland Islands by Argentina on April 2, 1982 can be used to illustrate the four basic national interests and the intensity of their effect. For Argentina the possession of the islands represented the definition of its “own nationality in terms of sovereignty in the South Atlantic, the islands, and Antarctica.”¹⁷ Argentine policy makers viewed the islands as part of their homeland, although they had been under British control since 1832. For Great Britain and:

...especially for the Conservative government of Prime Minister Margaret Thatcher, the Falkland’s war was equally an important point, which served to boost national pride, relive some glories of the lost empire, and eventually greatly improve the Conservatives performance in the next election.¹⁸

¹⁴ Ibid.

¹⁵ Ibid., p. 10.

¹⁶ Ibid.

¹⁷ Jack Child, *Geopolitics and Conflict in Latin America: Quarrels Among Neighbors*, New York: Praeger, 1985, p. 127.

¹⁸ Child Jack, Ibid. p. 114.

Economic interests that make the islands potentially valuable for both nations were based on possible oil, gas and krill. Under geopolitical¹⁹ concepts the Malvinas/Falklands Islands represented for Argentine leaders the possibility of having a "Greater Argentina that control[ed] the South Atlantic Basin." For Britain geopolitical concept meant maintaining the right to claims of territory in Antarctica.²⁰ Table 1, shows the Anglo/Argentine crisis under the national interest matrix of Nuechterlein.²¹

Country:	Argentina	Issue: Malvinas/Falklands			
	Britain				
Basic interest at stake		Intensity of interest			
		Survival	Vital	Major	Peripheral
Defense of the homeland			Argentina	Britain	
Economic well-being			Argentina	Britain	
Favorable world order				Argentina	Britain
Ideological			Argentina	Britain	

Table 1. National Interests Combined with Priorities of Interest²²

C. MARITIME NATIONAL INTERESTS

Stimulated by the logic used by Nuechterlein, this author has taken the freedom to use some of Nuechterlein's idea to analogously classify and determine maritime national interests. Concepts borrowed from Ken Booth and taken from his book *Navies and Foreign Policy* are also used analogously. Booth believes Nation-States basically use the sea for three general purposes:

¹⁹ Geopolitics is defined by a Colombian Military Officer as: "the science that evaluates the projection in territorial space of men, natural resources, power and a Nation-State to find its actual and future place within the world nations". General Daniel Garcia Echeverry, *Horizontes Geopoliticos Colombianos*, Imprenta y Publicaciones de las Fuerzas Militares, Bogota, 1991, p. 17. Geopolitics are defined by American authors as: "the impact on foreign and security policies of certain geographic features, the more important among these being locations among countries, distances between areas, and terrain, climate, and resources within states. Geopolitics might also be as the relationship between power politics and geography." Philip Kelly & Jack Child, *Geopolitics of the Southern Cone and Antarctica*, London: ?, 1988, p. 2.

²⁰ Child, Ibid. p. 128-131.

²¹ Nuechterlein, Ibid., p. 11-18.

²² Ibid. After Chart 1.3, p. 13.

- For passage of goods and services
- For presence of military force for diplomatic purposes, or for use against targets on land or at sea
- For exploitation of resources under the sea²³

1. Basic Maritime National Interests

Maritime national interests can be described in a similar way based on the assumption that the sea is considered an integral part of the Nation-State. Table 2 is a description of the analogous maritime national interests.

Table 2. Analogies for Maritime and National Interests

Defense of Homeland	Defense of the Sea
Economic Well-being	Sea Economy
Favorable World Order	Favorable Sea Interests
Ideological	Maritime Consciousness

The following are definitions:

- **Defense of the Sea:** the defense of the Nation-State's interests at sea against threat of invasion of territorial and jurisdictional waters.
- **Sea Economy:** the enhancement of the Nation-State's well-being based on the adequate exploitation of maritime resources.
- **Favorable Sea Interests:** the maintenance of an adequate policy toward the management of maritime activities and the protection and preservation of the sea for future generations in accordance with the new law of the sea.²⁴

²³ Ken Booth, *Navies and Foreign Policy*, New York: Holmes & Meier, 1979, p. 15.

²⁴ This treaty "...covers all aspects of ocean access and usage and is composed of 320 articles. It establishes a right to natural resources, scientific research, and fishing, in which the coastal state would determine the rules for sharing the resources. Coastal states will also have sovereign rights over establishes a 12-mile territorial sea with the right of "transit passage" through and over straits used for international navigation. It provides for a 200-mile exclusive economic zone with respect exploitation of resources on the continental shelf to a distance of 350 miles from shore, subject to sharing with the international community part of the revenue from such exploitation beyond 200 miles. Measures to prevent and control marine pollution are included in the treaty. The treaty was approved in December of 1992 by 151 nations in Jamaica. Technically and legally the treaty was in force in November 1994, one year after ratification by the sixtieth state, Guyana." A. Leroy Bennett, *International Organizations: Principles and Issues*, Englewood Cliffs New Jersey: Prentice Hall, 1995, p. 346.

- **Maritime Consciousness:** the awareness of the value of the sea. That is a perception of the political, economic and social potential of the sea and an adequate use of the sea as part of the nation's existence and development.

To continue with the analogy, there are basic values that leaders and citizens hold important to their national well-being. These values guide policy makers of Nation-States in their decisions and formulation of policies. These values accumulate to become the basic national interests. If these values are applied to maritime national interests, they become what the Nation-State and its people expect from the sea.

2. When are the Maritime Interests Vital?

All interests related to the sea can be grouped into four basic maritime national interests:

- Defense of the sea
- Sea economy
- Favorable sea interests
- Maritime consciousness

The degree to which issues threaten any or all these maritime interests in either the internal and external environment determines the priority of the interests. Priority may be survival, vital, major or peripheral. The priority of the maritime national interests usually dictates the vision, objectives and decisions that leaders adopt to meet national challenges. Priority also determines the strategic management process for maritime interests. When circumstances significantly affect the maritime national interests and leaders may not change or compromise those interests, then it may be concluded that the maritime interest is a vital interest.

Vital interests include not only defense but also economic, world order (alliance and national prestige), and occasionally ideological interests. Nuechterlein outlines sixteen

factors that are essential for a clear analysis of basic national interests. These factors are under the general categories of political, economic or military. The factors are divided into

Table 3. Factors Determining Maritime National Interests²⁵

Value Factors	Cost/Risk Factors
Proximity of Danger	Economic Cost Hostilities
Nature of Threat	Estimated Casualties
Economic Stake	Risk of Protracted Conflict
Sentimental Attachment	Risk of Enlarged Conflict
Type of Government	Cost of Defeat
Effect on Balance of Power	Risk of Public Opposition
National Prestige at Stake	Risk of UN Opposition
Policies on Key Allies	Risk Congress Opposition

two groups. The first groups are value factors and the second cost/risk factors. Table 3 lists the factors that can be applied to most of the four maritime national interests.

Appendix A explains how these factors can be applied to the four maritime national interests. To assess the values and costs/risks, Nuechterlein proposed that each factor is evaluated in terms of survival, vital, major or peripheral interests. The factors also are rated as low, medium, high or very high. If a nation's value for these factors averages out to "major" and the cost/risk factors averages to "vital," then the nation's maritime interest is probably a major interest. If the value for these factors average to "high" and the cost-factors average "low," then the nation's maritime interests are probably "vital." A numbering scale may be used, with "1" representing a low value or cost and "10" a very high stake or cost. Using this range if the value numbers sum to at least 40 and costs numbers sum to at least 50, then the nation's interest is probably a major interest.²⁶ Figure 1 shows a questionnaire that could be used to quantify maritime national interest. Even though national maritime interests can be evaluated according to priority, these interests will not be developed or maintained if the nation's maritime power is not well managed.

²⁵ Nuechterlein, After Table 2.1, p. 20.

²⁶ Nuechterlein, Ibid., p. 19-37.

Questionnaire: Determination of Vital Maritime Interests		
Values	Costs/Risks	
<input type="checkbox"/> Proximity of the danger	<input type="checkbox"/> Economic costs of hostilities	
<input type="checkbox"/> Nature of the threat	<input type="checkbox"/> Estimated casualties	
<input type="checkbox"/> Economic stake	<input type="checkbox"/> Risk of protracted conflict	
<input type="checkbox"/> Sentimental attachment	<input type="checkbox"/> Risk of enlarged conflict	
<input type="checkbox"/> Type of government	<input type="checkbox"/> Cost of defeat or stalemate	
<input type="checkbox"/> Effect on balance of power	<input type="checkbox"/> Risk of public opposition	
<input type="checkbox"/> National prestige at stake	<input type="checkbox"/> Risk of UN opposition	
<input type="checkbox"/> Policies of key allies	<input type="checkbox"/> Risk of congressional opposition	
NOTE: You may indicate the degree of concern each of the value and cost/risk factors holds for you by using any of the following ranking systems:		
(a)	(b)	©
Very high	Survival	9 - 10
High	Vital	6 - 8
Medium	Major	3 - 5
Low	Peripheral	1 - 2

Figure 1. Questionnaire²⁸

3. Maritime Power

Maritime power can be interpreted as the capacity to influence and maintain the maritime objectives of a Nation-State. Maritime power is:

...an expression of the nation's power and at the same time is the result of the integration of means; in the political, economical, social and military arenas.²⁷

In theory, Maritime power consists of all the activities related to the use of the sea, seacoast, interior waters, natural resources, marine shelves, and sea control. It also includes the infrastructure that makes possible the development and usage of the sea for the benefit the Nation-State.

²⁷ Romero Edgar. *Poder Marítimo - Colombia y el Caribe. Memorias Simposio sobre el Poder Marítimo en Colombia*. Cartagena, Colombia, November 16-17, 1995, p. 78.

²⁸ Nuechterlein. After Figure 2.1, p. 36.

The following components are considered as elements of maritime power:

- Defense
- Living resources
- Non-living resources
- Energy
- Marine transportation
- Recreation
- Marine research²⁹

All of these activities and elements require regulation and management by the Nation-State to promote and preserve state's maritime national interests. Maritime Authorities and Coast Guard Services³⁰ normally manage and coordinate these maritime activities in many nations. These authorities are duty-bound to pursue the interests of the nation in maritime activities.

4. Maritime Authority

Nation-States establish maritime authorities to direct, regulate and manage maritime activities and to fulfill the national maritime objectives within that states national maritime interests. Nation-States also coordinate many of these maritime activities with international conventions and the new law of the sea. There are many maritime agreements with the international community. Agreements are signed in accordance with the Geneva Conventions regarding marine activities. The agreements are administered within the conventions by the International Maritime Organization (IMO). IMO is the United Nations

²⁹ Francis W. Hoole, Robert L. Friedheim and Timothy M. Hennessey, *Making Ocean Policy: The Politics of Government Organization and Management*, Boulder, Colorado: Westview Press, 1981, p. 73.

³⁰ It is important to clarify that Coast Guard Services are constantly ready and employed when required as part of the Naval power in defense of homeland interest.

agency concerned with maritime matters such as the Safety of Life at Sea (the SOLAS Convention) or the International Marine Pollution conference known as MARPOL.³¹

5. Coast Guard Service

A Coast Guard Service's duties derives from the obligation of a Nation-State to provide security, protect life and preserve the sea within the Nation-State's maritime national interests. The Coast Guard Services are responsible for operatively managing maritime activities and providing security that the Nation-State establishes according to national objective. The police role is an internal duty and nations orient this role to extend sovereignty over the state's own maritime frontiers.

6. Maritime Activities

Maritime activities of a Nation-State are activities that include potential exploitation and development of the sea. To meet the national maritime objectives, a state requires a Maritime Authority and a Coast Guard Service that constantly manage, regulate, protect, maintain and preserve national maritime interests. The Maritime Authorities and Coast Guard Services pursue the nation's interests in the following four major areas of maritime interests.

a. Maritime Law Enforcement

Activities of law enforcement usually include regulation and control of illicit activities in the following areas:

- Flow of illicit drugs
- Flow of weapons
- Flow of contraband
- Illegal migrations
- Piracy

³¹ Cuyvers Luc, *Ocean Uses and Their Regulation*, New York: Wiley-Interscience, 1984, p.100-121.

- Fisheries
- Law enforcement contribution to the internal order of the Nation-State

b. Maritime Safety

Maritime safety activities support national economic and environmental interests of a Nation-State. These activities include:

- Support to vessel traffic management
- Aids to navigation
- Protection of marine resources and maritime environment
- Maintenance of the capacity to respond to any maritime emergency
- Enforcement of laws and treaties promulgated and agreed to, by each Nation-State

c. Environmental Protection

The environmental protection role contributes to a healthy maritime environment. This function protects maritime economic interests and also preserves its value for future generations. Activities in this area include:

- Control of the ocean dumping of hazardous materials
- Control marine pollution in the transport of chemicals and fossil fuels

d. Maritime Defense

The Maritime Authority and Coast Guard Service have a unique relation to Naval power. Normally when adversaries threaten the homeland and defense of the sea interests, these organizations become part of the Naval power of Nation-State. This is for the purpose of protecting national interests. For this role the Maritime Authorities and Coast Guard Services are equipped with a fleet of vessels and aircraft with military characteristics. During wartime these organizations support operations such as port security, port safety, harbor defense and coastal sea control.

Figure 2 summarizes the material presented in this chapter and the process that Nation-States use to further their basic maritime national interests, extend their sovereignty, and realize the resources in their maritime jurisdiction. Figure 2 shows this process in the terms of strategic management and national maritime interests.

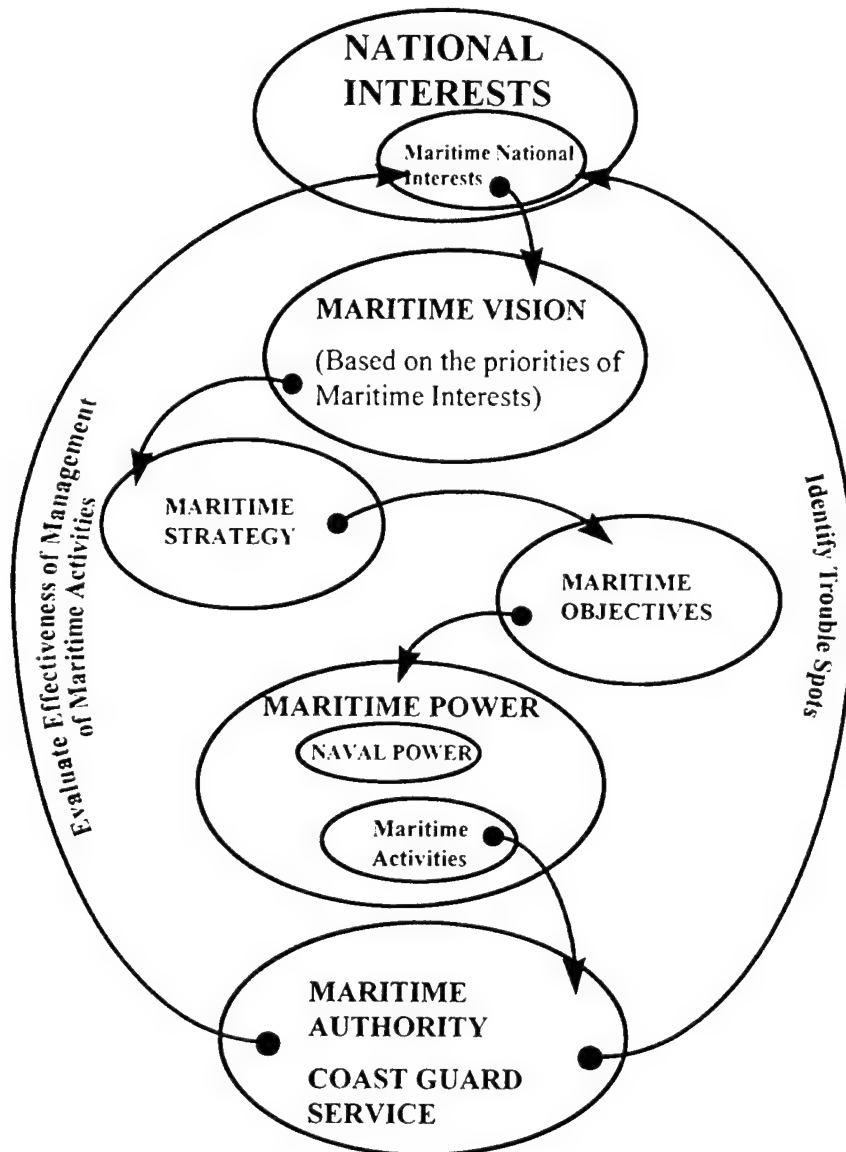


Figure 2. Strategic Management of Maritime National Interests

III. COLOMBIAN MARITIME AUTHORITY AND COAST GUARD SERVICE

The Star and MacCaskey models from organizational theory are useful for the examination of organizational frames and to find the similarities and differences between the Colombian Maritime Authority and Coast Guard Service and other similar foreign services. Combining the two models in a dynamic way allows us to better comprehend the variables of these institutions. This dual model shows the influence of strategic management in maritime activities and defines the outcomes that these organizations should produce. Additionally, the models qualify maritime consciousness and provide an analytic method for the Naval organizations managing maritime activities in Colombia. The survey addressed to senior active and retired Naval Officer's also has been used to highlight important features of the institutions.

A. DYNAMIC SYSTEMS MODEL

The dynamic systems shown in Figure 3 is a combination of the Star Model and the MacCaskey Model.³² The Star Model analyzes structural forms and organizational processes.³³ The MacCaskey Model shows what a group or entity produces, the group's outcomes and the influence of design factors on the organization and its culture.³⁴ The following is a brief explanation of the dynamic model's adaptation for this study's analysis of variables in a maritime organization:

³² The author adapted the model to analyze maritime organizations with the same principles used by Kristen Ann Dotterway in: "Systematic Analysis of Complex Dynamics Systems: The Case of the USS Vincennes." Master's Thesis, Naval Postgraduate School, Monterey, CA, 1992, p. 131-153.

³³ *Designing Organizations. An Executive Briefing on Strategy, Structure and Process*, San Francisco: Jossey-Bass, 1995, p. 11. And Galbraith, Jay R. Nathanson Daniel A. *Strategy Implementation: The Role Structure and Process*, St. Paul, Minnesota, 1978, p. 3.

³⁴ Michael B. McCaskey, "Framework for analyzing Work Groups." Harvard Business School, case 9-480-009. August 15, 1996.

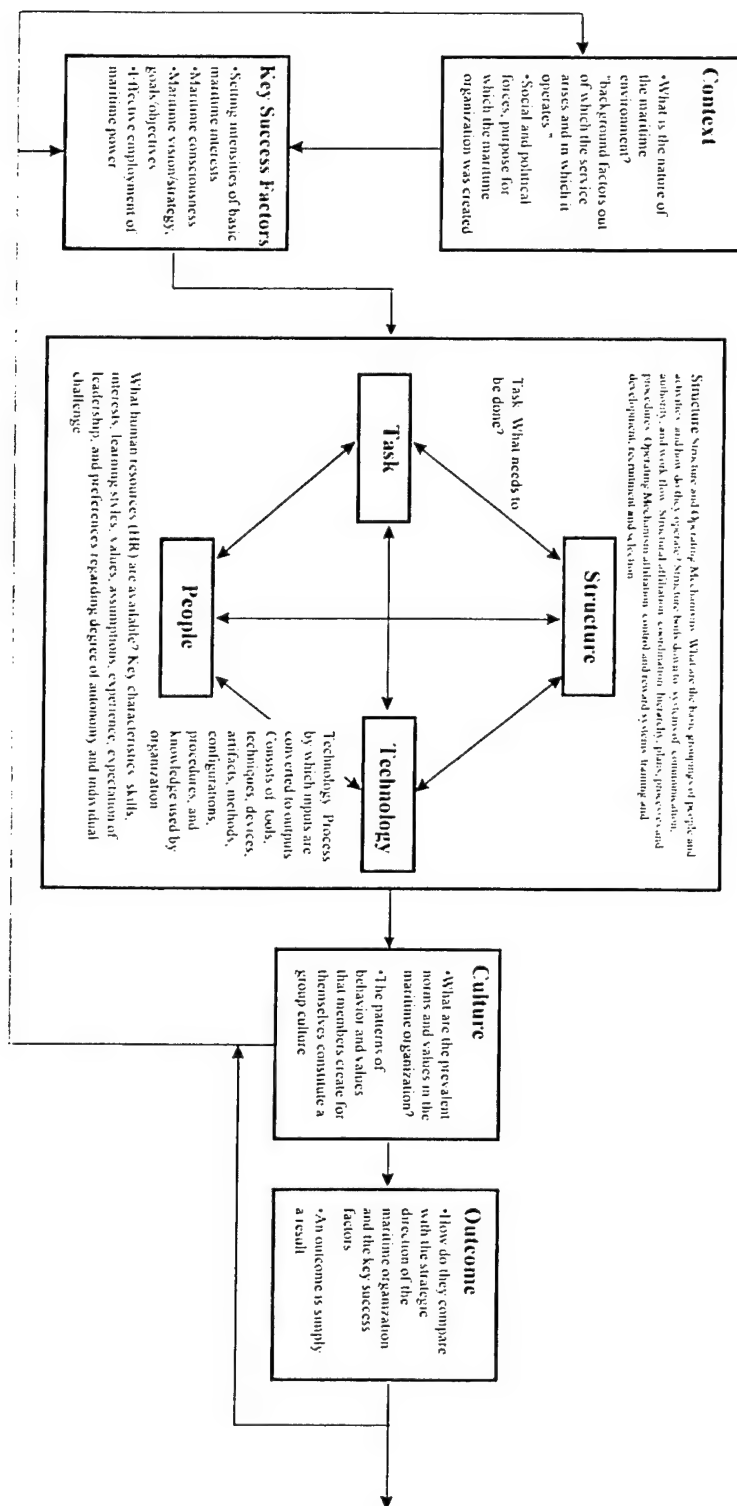


Figure 3. Dynamic Systems Model

The first section, *environment*, involves the following question: What is the nature of the maritime environment? The environment/context comprises the background factors for which the maritime service arises and in which the service operates. The environment/context consists of the external social and political forces that are the reason for which the Nation-States has created the maritime organization. These factors include threats, allies, friends, regulations, and the nation's history.

The next component in the Dynamic Systems Model is *key success factors*. The question can be formulated as: What does it take to be successful? Some of the key success factors are; strategic management, maritime consciousness, and adapting to change. In relation to Maritime Authorities and Coast Guard services, key success factors are the effective setting of priorities or efforts to protect basic maritime national interests; development of a maritime consciousness; a maritime vision, defining strategic issues, goals and objectives; and an effective employment of the elements of maritime power.

The major section of the model is the Star Model that comprises *task, technology, people and structure*. The Star Model's organization design factors are important in the behavior of the maritime service. This model consists of people who form the entities; the tasks that the people are required to perform; the technology of the organization; and the formal structure and operating mechanisms of the organization. The management goal is to arrange these factors in such a way that enhances the organization effectiveness to manage maritime national interests. These *organizational* design factors can be defined as follows:

- **Task:** What needs to be done? Tasks involve the production of goods and services and all key interdependencies among sub-units required to accomplish the mission. Task requirements involve the interactions among people; variety of activities involved, novelty of the tasks; and the degree to which the work place is under an individual's control³⁵

³⁵ Ibid., p. 6.

- **People:** What human resources are available? Does the existing structure, operating mechanisms and culture facilitate the desired patterns of behavior in the people of the maritime organizations? Research on group behavior and organizational design focuses on characteristics such as: skills; interests of individual members; learning styles; values; assumptions and experience; expectation of leadership; and preferences regarding the degree of autonomy and individual challenge.³⁶
- **Technology:** What are the means by which a task can be accomplished? The technology of an organizational system consists of tools, techniques, devices, artifacts, methods, configurations, procedures and knowledge used by organizational members. This technology is used to acquire inputs, transform inputs into outputs and provide outputs or services. The primary function of technology is to enhance quantity and quality of work an individual can accomplish and to increase the reliability of individual performance.³⁷
- **Structure and Operating Systems:** What are the basic groupings of people and activities, and how do they function? Organizational structure is the formal pattern of activities and interrelationships among various sub-units of the organization. Integrating devices such as communication process, coordination, hierarchy, information systems, plans and procedures are associated with the structure. Control systems, reward systems, training and development, and recruitment and selection are associated with operating mechanisms.³⁸

The next section is *culture*. What are the prevalent values and norms of the maritime organizations, and does this culture strengthen or weakened from effectiveness? The patterns of behavior and values that members create for themselves constitute a group's culture. Henry Mintzberg and James Brian Quinn provide a more specific view of how culture relates to an organization:

Culture is not an article of fashion, but an intrinsic part of a deeper organizational character... Culture thus permeates many critical aspects of

³⁶ Ibid., p. 6.

³⁷ William A. Pasmore, *Designing Effective Organizations: The Sociotechnical Systems Perspective*, New York: John Wiley and Sons, 1988, pp. 55-58.

³⁸ MacCaskey, Ibid., p. 7.

strategy making. But perhaps the most crucial realm is the way people are chosen, developed, nurtured, interrelated, and rewarded in the organization. The kinds of people attracted to an organization and the way they can mostly deal with problems and each other are largely a function of the culture a place builds and the practices and systems which support it.³⁹

The final part of the model is *outcome*. An outcome is simply a result. It can be defined in terms of productivity and goal achievement. How does the result compare with the strategic direction of the maritime organization and the key success factors? Outcomes are multidimensional and have effects on culture and on the organizational design factors. They serve as feedback to the system.

The Dynamic Systems Model comprises not only the interdependent design factors, but also the environment, key success factors, culture and outcomes. These factors also are interdependent with respect to each other as shown by the arrowheads and response loops in Figure 1. This indicates that a change in any variable of the dynamic model affects the other variables.

In summary, The Dynamic Systems Model shows what a maritime organization produces, its outcomes, and how the set of factors in the model influences the model. Factors such as culture refer to the usage of the sea by the Nation-State. Interaction of the design factors creates a culture within the maritime organizations. These factors or variables include four elements: people in the service, tasks they perform, means by which inputs are transformed into outputs, and the structure and operating mechanisms of the maritime organization.

The key success factors and context or environment shapes design factors and how they interact. They include the setting of priorities for maritime national interests. These interests include the elements of protecting resources, maritime vision, maritime consciousness and maritime power.

³⁹ Lee B. Bolman and Terrence E. Deal, *Reframing Organizations Artistry, Choice, and Leadership*, San Francisco: Jossey-Bass, 1991, p. 268.

These variables and their interactions may ultimately affect the outcome or management of maritime activities. It should be understood that the whole system is dynamic and this is one of the more important observations for this study. Variations in any part of the model lead to the creation of the similarities and differences of maritime organizations.

B. METHODOLOGY

A comparative case method is used to examine the prominent features of the Colombian Maritime Authority and Coast Guard Service in order to establish similarities and overlapped functions. The framework for analyzing the organizations in this chapter is the Dynamic Systems Model combined with the results of a survey. The source of data is from the official publications of the two organizations and selected answers to the questions in the survey (Appendix B).

C. COAST GUARD SERVICE

After five years of operation the Colombian Coast Guard Service is considered a junior component in the Navy. The Coast Guard has duties to fulfill in Colombian jurisdictional waters. Illustrated in Figure 4 are the jurisdictional waters in both the Atlantic and Pacific Oceans. The organization has developed and matured to support security at sea within the reality of a Nation-State with significant social and political problems. Analysis using the Dynamic Systems Model gives the results in the following sections.

1. Environment/Context

The Colombian Government activated the Coast Guard Service to combat illegal substances and weapons (illicit drugs, explosives and weapons) and agents of this violence being smuggled through Colombia's jurisdictional and territorial waters.⁴⁰ These unlawful

⁴⁰ Policy to confront agents of violence. Measures to combat the narco-traffic chain. Found in "Responsibilities of the State entities in the execution of the National Strategy against Violence." Presidential Directive No. 5. 28 December, 1991, p. 9-11.

activities had dramatically increased the levels of violence in the country during the past six years. In this context and with a maritime environment requiring additional safety and control, the government activated the Coast Guard Service as a specialized component of the Navy, using the authority provided by Law No. 1874 of 1979. With this action, the immediate purpose of the Coast Guard organization was to confront illegal activities at sea. The government of President Gaviria activated the Coast Guard Service as a political action that included protection of sea economy and the favorable sea interests of Colombia as implemented in Law No 10, 1978. The framework of this law establishes norms for territorial waters, economic exclusive zone and the continental shelf.

This context generates the operating environment for the Coast Guard Service. Colombia operates as a Nation-State through its Coast Guard Service to exercise its sovereign rights: to explore, exploit, preserve and administer living and non living resources



Figure 4. Colombian Jurisdictional Waters

in the 200 nautical miles economic exclusive zone, territorial waters and continental shelf. The government of President Samper continued with his predecessor's strategy and included "Security for the People" as an additional objective of the Coast Guard Services. This was for the purpose of increasing surveillance and control of the sea and to neutralize illegal activity in Colombian jurisdictional waters.⁴¹

This context/environment implies defense of national interests, sovereignty, independence, integrity of national territory and constitutional order by the Armed Forces.⁴² Quoting the mission statement of the Coast Guard Service summarizes the context and also describes the services its environment. The Coast Guard's mission is to:

Ensure maritime safety and protect the nation's maritime interests in jurisdictional waters, with the execution of proper operations, that contribute with the internal order of the country, territorial integrity and national development.⁴³

In summary the environment that surrounds the Colombian Coast Guard has various elements. First, there is the expectation that the service will greatly reduce the quantities of illegal drugs shipped from Colombia by narco-traffickers. Second, there is an important emphasis on the goal of cutting the supply lines of the guerrilla groups in Colombia for explosives and arms that are delivered by sea. Lastly, the political actions of the government influence the context of the service. Since the government plans to control maritime activities, the state has invested significant resources to accomplish its national objectives.

2. Key Success Factors

The instructions given in the first presidential directive to reactivate the service at the beginning of 1992 and the context of Law No.10 reinforce strategies dealing with security for the Colombian people. Key success factors surround strategic management and

⁴¹ Policy to neutralize all forms illicit traffic. Presidential Directive No. 3, "Security for the People. Responsibilities of State entities in the execution of the second phase of the National Strategy against violence," p. 10.

⁴² Article 217, Colombian Constitution.

⁴³ Libro de Organizacion Cuerpo de Guardacostas. ARC-LO, 1991, p. 6.

responsiveness of the services. Success factors for the Coast Guard are molded by the priority given by the government to basic maritime national interests.

As previously observed, priorities were set to neutralize the agents of violence affecting the social peace of the Nation-State and security for the Colombian people. With these priorities in mind, requirements for success were to use existing operative Naval organizations. Since the context generates the protection of favorable Colombian Sea interests, the key factors in success became the Navy personnel and assets already experienced in management maritime activities. These assets are used to protect and preserve the sea. At this point maritime vision,⁴⁴ strategic issues, goals and objectives were set under the existing development plans of the Navy. Priorities for basic maritime national interests were set within a political context and within budget constraints.

3. Task

The task assigned to the Coast Guard Service derived from the obligation of Colombia as a Nation-State to provide maritime security. This required that Coast Guard units focus all actions to guarantee the protection of human life at sea and the nation's maritime interests. Law No. 1873/79 identifies the following functions:

- Contribute to and defend national sovereignty
- Control fisheries
- Cooperate with customs operations and in the control of contraband
- Conduct search and rescue operations
- Protect the marine environment against contamination
- Protect ships and their crews according to International Law

⁴⁴ "The National Navy will be the most important instrument that Colombia has to guarantee the protection of its national sea interests and jurisdictional areas, therefore, all naval and marines units will be prepared at any moment to confront the variety of possible threats. Its activities will contribute to maintain sovereignty and national development, its men will be the promoters of national maritime power, by using human development and leadership with quality." *Colombian Navy Vision Statement*.

- Control and prevent illegal immigrations and migrations
- Contribute to and maintain the internal order of the nation
- Protect the natural resources
- Contribute to Oceanographic/Hydrographic investigations
- Control maritime traffic
- Cooperate with Colombian organizations that realize state activities at sea
- Cooperate with the Colombian realization of legal activities at sea
- Enforce all additional tasks that law and regulations indicate

The Colombian Coast Guard Service accomplishes these functions through the Coast Guard Commands of the Atlantic and Pacific Oceans and First, Second and Third Category Coast Guard Stations.

These Coast Guard Stations perform surveillance and control operations. The operations of these stations are based on command and control technologies and provide insights into the nature and requirements of maritime security. Station components of the Coast Guard Services develop intelligence about the threats in their environment. They identify threats, capabilities, intentions and vulnerabilities. Stations also process information to assess their own operational situation. This assessment is done on a real time basis and provides situational awareness of maritime security.⁴⁵

Coast Guard units base interactions on the operative concept of the control of ports and designated areas (islands, shallow waters, bays, interior waters). This control is twenty-four hours a day including surveillance, control and interdiction operations. Authority and lines of communication are by traditional military channels. These channels are used for reporting and information purposes. Communications at the operations level is

⁴⁵ A U.S. Marine Corps Concept Paper, C4I Division, Headquarters, U.S. Marine Corps. Command and Control, 1995, p. 36.

dynamic and provides individuals with an awareness of the operational situation in real time.

In summary, maritime safety, maritime law enforcement, marine environmental protection and maritime development activities, are tasks that the Coast Guard must perform. This number of activities or tasks creates interdependence and constant interactions within the Coast Guard organization. Multiple missions have a powerful effect in the organization's dynamics. These missions challenge the service to maximize expertise in management of maritime activities.

4. People

The human resource factor is the most important element in any organization. For the Colombian Coast Guard Service the source of this key element is the rank and file of the Navy. Navy Headquarters transfers personnel from surface ships and bases to assignments in the Coast Guard Service for periods up to five years. Naval Officers may stay in the Coast Guard for three years before they return to the fleet.

People of the Coast Guard Service are sea service professionals sent by the Navy to fulfill duties and provide required expertise to the Coast Guard. However, these fleet personnel require special training to handle law enforcement operations. These are the operations most frequently conducted by the Coast Guard. The senior personnel of the Coast Guard provide training to new personnel based on qualification standards. The training in Coast Guard procedures must be accomplished before new personnel are involved in or conduct any operation. People transferred to the Coast Guard Service are selected based on an analysis of their service records. The observation is that the organization is designed to qualify people before they become actively involved in the tasks assigned to the Coast Guard.

Coast Guard expectations of personnel depend on the training and preparation given for specialized skills and tasks. These tasks are difficult to master and are rigorously tested to see that personnel meet qualifications. An example is the procedures for hostile inspections and boardings. People in the Coast Guard are expected to serve with

professionalism and honor. Men and women in the service expect that the leadership of the Coast Guard organization has prepared them with the skills necessary to manage maritime security, and they may rely on each other.

5. Technology

The technology used is based on patrol boats, aircraft, Command Control Communication Intelligence System (C³I) and infrastructures (Coast Guard Stations). The structure of the organization integrates the hardware to the Command and Control technology as previously described. The material employed by the Coast Guard Service personnel provides the means to accomplish the tasks of surveillance and control that represent security at sea. Figure 5 describes how technology enhances the work of people in the jurisdictional waters assigned to the Coast Guard. The service is assigned to protect

Technology for Surveillance and Control of Jurisdictional Waters

	INTERIOR WATERS	TERRITORIAL SEA CONTIGUOUS ZONE	ECONOMIC EXCLUSIVE ZONE
PORT SECURITY BOATS			
PATROL BOATS			
BLUE WATER UNITS			
AIRCRAFT			
C ³ I MARITIME TRAFFIC CONTROL			

Figure 5. Technology in the Jurisdictional Spectrum

basic maritime national interests and uses different technological assets for this task. All assets are integrated into the maritime environment. Specific areas that require technological means with special characteristics also are integrated in the operational areas. With the use of the C³I technology, the law enforcement tasks are made more efficient.

6. Structure and Operating Systems

Tasking makes the Coast Guard Service a machine bureaucracy within the Navy. However, the Coast Guard has divisionalized units that make up its operating core. These units are characterized by functions that produce security. Figure 6 shows the organization charts of the operating units of the Coast Guard Groups on the Atlantic and Pacific coasts.

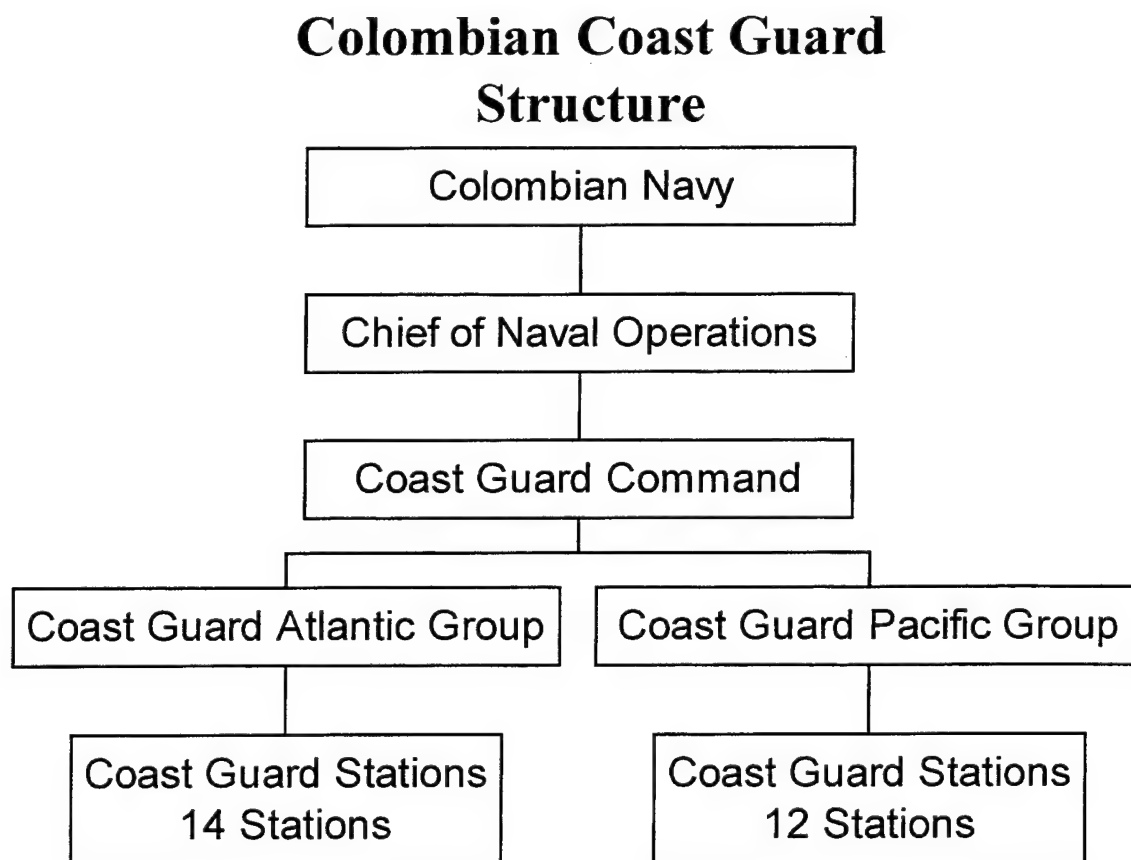


Figure 6. Coast Guard Organizational Chart

The Headquarters and the two area commands are the strategic apex.⁴⁶ Coast Guard Stations are also part of the operating core of the service. Figures 7 and 8 show how the Coast Guard Stations are adapted to their jurisdictional environment. The previous description of the organization configuration use Henry Mintzberg's definitions.⁴⁷



Figure 7. Atlantic Coast Guard Stations

Navy headquarters has tasked the Coast Guard Stations with control operations in territorial waters, emphasizing law enforcement against illegal drugs, chemicals, arms, explosives and illicit activities such as piracy, common delinquency, and contamination. The Coast Guard Service has many tasks to perform; its structure is directed to solving

⁴⁶ James M. Higgins *The Management Challenge. An Introduction to Management*, New York: Macmillan, 1991, p. 291.

⁴⁷ Lee B. Bolman and Terrence E. Deal, *Reframing Organizations. Artistry, Choice, and Leadership*, San Francisco: Jossey-Bass, 1991, p. 86.

COLOMBIAN COAST GUARD STATIONS PACIFIC COAST

PACIFIC OCEAN

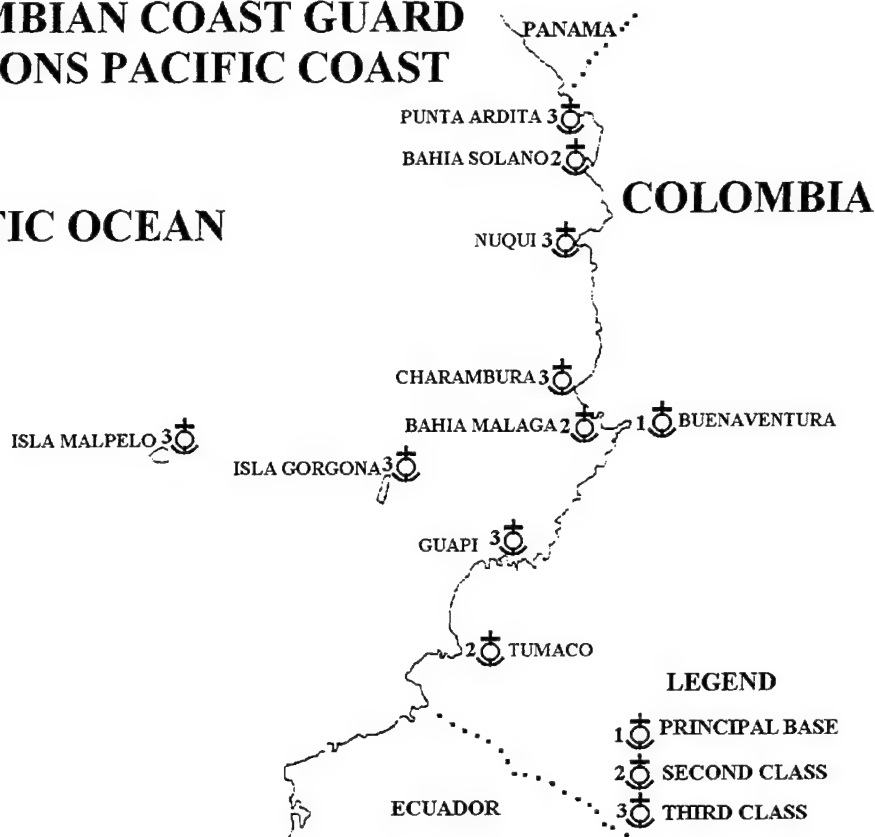


Figure 8. Pacific Coast Guard Stations

problems that have developed during the recent violent history of Colombia. The service focuses on the maritime national interests of defense of the sea, and the structure is designed to contribute to the execution of a national strategy against violence. The design of structure at the operating level allows the Atlantic and Pacific groups the ability to perform operations and logistical support in a decentralized manner. Command plans activities regionally, based on intelligence reports from law enforcement operations. Other tasks are assigned to surveillance patrols.

The management and communication involves both horizontal and vertical processes. Horizontal communication is commonly used during operations and activities that require coordination of other units or government entities. Military hierarchy uses the

vertical processes to inform others of results and administrative status. This hierarchy also is used to transmit changes in policy or broadcast strategic directions from the strategic apex.

The interaction between tasks, technology, and people has great influence over the operating systems required in the Colombian Coast Guard Service. Constant threats such as narco-traffic, common delinquency, piracy and smuggling of arms, chemical precursors and explosives make the interrelationships and coordination crucial to the organization and are updated on a real time basis.

People that enroll in the Coast Guard Service do so on a selective basis and this gives them a sense of choice. Also knowing the importance of tasks assigned to the service gives them a sense of meaningfulness as they accomplish different missions. Over time, a sense of competence arises as the people gain experience at sea.

The short tours of personnel assigned may be analyzed as positive in some respects and negative in others. The decision to shorten length of duty is based on preserving the integrity of Coast Guard law enforcement tasks. Since drug cartels in Colombia have abilities to penetrate and corrupt official entities, the rotation of personnel may reduce this possibility of corruption.⁴⁸

The negative aspect is that skills and competence gained in a tour of duty in the Coast Guard are lost as personnel return to the Navy for normal sea duty. Here the trade off is between gained experience and readiness. Having performed successfully in the Coast Guard boosts people in their Naval careers. The overriding design factor is to protect the human resources of the Coast Guard from corruption, and this compensates for the loss of expertise.

7. Culture

Esprit de Corps are the words that define the culture of the Colombian Coast Guard. Because of high expectations for accomplishment of the missions assigned, promoting maritime power and the risks of tasks at sea, the Coast Guard forges a very tight team. The

⁴⁸ Hernando Wills, "Effects of the War on Drugs on Official Corruption in Colombia," Master's Thesis, Naval Postgraduate School, Monterey, California, 1995, p. 36.

institution also bases its culture on the needs of society. Esprit de Corps and service to the community encourage the service. The tasks that require enforcement of security at sea contribute to community and the respect for the services.

8. Outcomes

Goal achievement and productivity can be assessed in two ways: by the tangible and the intangible results. Table 4 shows tangible results for an average day in the Colombian Coast Guard Service. The table uses 1997 operational data. Appendix D includes records for the last two years. The security that the organization now provides is an intangible outcome; it deters illegal actions. Control operations have generated a safe environment in the major ports.

Table 4. Average Colombian Coast Guard Day⁴⁹

Saved Lives	1 every month
Assisted People	every two days
Completed Search and Rescue Cases	every two days
Infraction Remitted to Port Captains	1 every two days
Sanctions Imposed	2
Fisheries	1 every two days
Responded to Oil and Chemical Spills	0
Inspected Commercial Vessels	25
Boarded Large Vessels	0
Seized Marijuana	2 kg
Seized Cocaine	7 kg
Interdicted Illegal Aliens	0

Another outcome is the constant update to operational procedures. In summary, the new organization has just passed through a stabilizing period due to its initial success and the expansion plans of headquarters.

⁴⁹ Information sent by Colombian Coast Guard Headquarters. Observing that actually the service does not have equipment, personnel trained for response to oil or chemical spills, or the maritime authority. In the author experience Colombia private oil companies operating at sea are actually responsible for their spills. But these companies have limited resources for this purpose.

D. MARITIME AUTHORITY

Maritime Authority in Colombia is an organization that Colombia as Nation-State has for the purpose of directing, coordinating and controlling maritime activities within established laws. Through this institution, the government promotes and maintains maritime development. The Dynamic Systems Model gives the following "snapshot" of the organization:

1. Environment/Context

Research shows that the Maritime Authority started as part of the Navy in 1945 with the responsibility of maintaining aids to navigation in both the Atlantic and Pacific Oceans. In 1948 the government restructured the Navy and established the maritime and fluvial vessels flying the Colombian flag, owned or subsidized by the government as the primary reserve fleet. Personnel registered in the national merchant marine and fluvial fleets were assigned as reserves in the Navy. To fulfill this objective, the government signed decree 120 in 1951 giving the Navy the responsibility "of recognizing, classifying and registering people and vessels constituting the Naval reserves."⁵⁰

The information on reserve personnel and the reserve fleet was in different organizations. This information included technical control of the merchant marine, international regulations for preserving life at sea, maintenance of navigational aids, and expedition of sea licenses. Because the experience and data were in different organizations, in 1952 the government created the Merchant Marine Agency. This agency was a component of Naval Headquarters.

In 1971 by decree 2349 the government restructured the organization as the Maritime and Port Agency. The agency was made responsible for the important functions of setting up maritime research and contamination control and regulating the maritime traffic activities according to agreements with the international community. In 1984 decree 2324 renamed the Maritime and Port Agency as the Maritime Authority. This law defines the

⁵⁰ Law 92, 1948, articles 7 and 51. Salas de Salcedo, Elizabeth. *Conference* conducted on December 1, 1989, p.1-2.

context (jurisdiction) and environment for that organization. The Maritime Authority enforces policies in maritime transport, marine environment protection, marine research, aids for navigation, preserves life at sea and construction on seashores. Figure 9 and 12 shows the jurisdiction of the Maritime Authority according to Law 2324/84.

2. Key Success Factors

Because the Maritime Authority is the main agency in Colombia directing, coordinating and controlling maritime activities, the key success factors for the authority

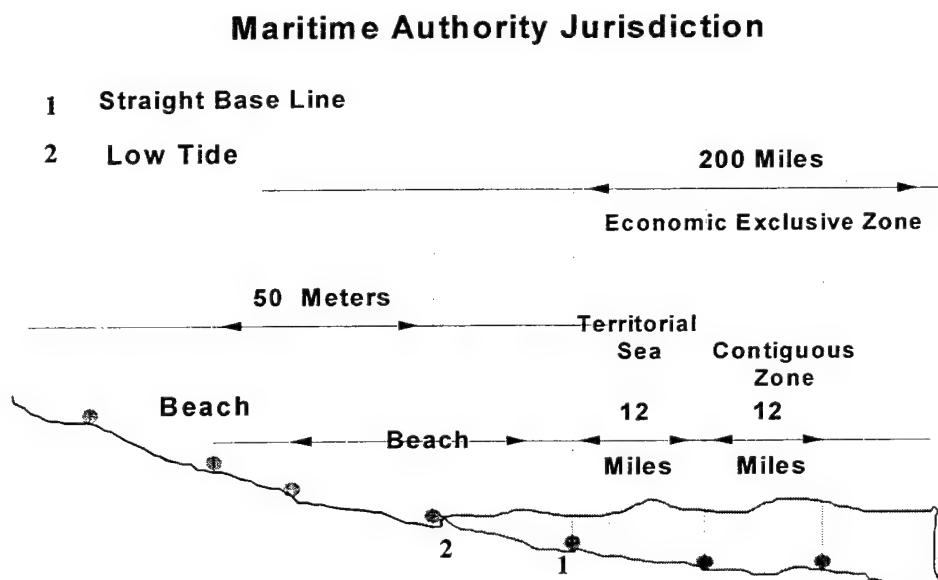


Figure 9. Maritime Authority Jurisdiction

involve people. The evolution of the organization has been based on the experience and professionalism of Naval Officers up until this time. These officers are prepared in various disciplines related to maritime activities.⁵¹

The settings of priorities of maritime national interests have only been set through Naval organizations that manage maritime activities, lacking key success factors from the

⁵¹ Pulecio, Gladys de Guarín. *XI Panorama de Desarrollo de las Actividades Marítimas en Colombia*, E-mail from Maritime Authority, January 24, 1997, p. 8.

Nation-State for the effective development of maritime power.⁵² To answer the question what does it take to be successful, Admiral Guidberto Barona's⁵³ in survey results sums the national reality:

The Colombian Maritime Authority since established has operated efficiently due to the preparation and expertise of its people in maritime aspects.

A historian and Naval Officer Captain confirms these key success factors:

During sixty years the Naval Academy has prepared sea professional gentlemen that come from all corners of the country, and has trained them in the different branches with sea-related tasks. They have contributed one way or another to awaken the consciousness of the maritime country.⁵⁴

This analysis points out that key success factors are rooted in the people of the Maritime Authority organization within the Navy. The Maritime Authority organization and the Navy lack the necessary participation in the development of Nation-State's maritime vision, strategic issues, goals and objectives that are needed in order to acquire an adequate maritime power.⁵⁵

3. Task

Decree 2324/84 establishes the tasks of the Maritime Authority consisting of direction, coordination and control of maritime activities. The Law also includes promotion and encouragement for the maritime development of the nation. The following functions are included in the law that describes the tasks involved:

⁵² "It is indispensable that Colombia issues an integral maritime policy to develop the essential elements of maritime power." *Conclusions, Memorias Simposio sobre el Poder Marítimo en Colombia*, Cartagena, Colombia, November 16-17, 1995, p. 134.

⁵³ Commandant of the Navy 1975-1977.

⁵⁴ Roman, Enrique, *Examen Histórico del Poder Marítimo Colombiano*, Manuscript send by E-mail, January, 1997, p. 1.

⁵⁵ "Colombians must see with strategic vision the use and exploitation of their seas. If Colombia does not exercise an adequate presence in her two seas, her neighbors will run over her." *Conclusiones, Memorias Simposio sobre el Poder Marítimo en Colombia*, Ibid., p. 135.

- Advise government in adopting policies and programs related to maritime activities and execute them within the limits of the Maritime Authority jurisdiction
- Direct, control and promote the development of the merchant marine, scientific research and adequate use of sea resources
- Coordinate the control of maritime traffic with the Navy
- Install and maintain the aids to navigation; conduct hydrographic measures, and print the national nautical charts
- Direct and control the activities related to navigation safety, human life safety at sea, maritime search and rescue, and determine crew requirements of merchant ships
- Authorize operation of vessels and Naval artifacts in Colombian waters
- Authorize and control acquisition, construction, repairs, modification, maintenance, use, scrapping of vessels and Naval artifacts. For these effects in vessels to be built, the authority may require to meet the characteristics recommended by the Navy for national security reasons
- Authorize and control activities related to the arrival, mooring, maneuver, anchorage and departure of vessels and Naval artifacts; practice arrival reception visits in Colombian ports for vessels and Naval artifacts through the Port Captains
- Execute and control the inscription, registration, inspection, classification, licensing and patent of vessels and maritime artifacts
- Authorize and supervise the organization and operation of shipyards, dockyards, workshops and installations that build, repair and maintain vessels and Naval artifacts. Register these facilities
- Authorize, registration and control the professional activities of persons and juridical organizations related to maritime activities. Especially to the activities of piloting, towage, maritime agents, retailers of vessels and chartering, ports, stowage, dredge, classification, recognition, diving, rescue and maritime communications. Issue the corresponding licenses

- Advise the government for the regulation and control of the centers for development, education, training of sea people, plans and programs. Register and issue the professional licenses to the graduates; issue the license to the Naval surveyors in different maritime activities
- Direct and control the activities related to international maritime transport, cabotage public or private; assign, modify or cancel sailing routes and determine the conditions for the usage of these routes
- Authorize agreements, settlements and associations of the Colombian ship owners, and cancel the authorization when, in the judgment of the Maritime Authority, these are not in the national interests
- Authorize the rent or chartering of national or foreign vessels and Naval artifacts
- Approve the participation of Colombian ship owners in maritime conferences and register their representation, codes, costs and freights
- Authorize the costs of freight for cabotage and international maritime transport and the ticket prices for tourist passenger transport
- Apply, coordinate, and fulfill the national and international norms to preserve and protect maritime environment
- Authorize and control the nautical archeology and treasure hunting, administer the contracts for extraction and recovery of them
- Authorize and control the concessions and usage of waters, low water terrain, beaches and areas of public domain in the Maritime Authority jurisdiction
- Regulate, authorize and control the construction and usage of artificial islands and structures the Maritime Authority jurisdictional areas
- Determine the anchorage areas for vessels and maritime artifacts
- Authorize and control the dredging works, refill and other oceans engineering works in the low tide zones, beaches and areas of public domains in the Maritime Authority jurisdiction

- Conduct investigations and sentencing for violation of merchant marine norms, maritime accidents, violations to cargo reserve, contamination of the marine and fluvial environment in the Maritime Authority jurisdiction. Also conduct investigations for illegal or unauthorized construction in areas of public domains and terrain's in the Maritime Authority jurisdiction and for violation of other regulatory norms of maritime activities. Impose the correspondent sanctions
- Advise the Government in international agreements, conventions and treaties in maritime topics and monitor their execution
- Develop activities and programs that related to the objective and ends of the Maritime Authority Organization

These tasks involve interactions with people that are in one or another way involved in sea activities. This list of tasks demonstrates that the Maritime Authority requires a variety of activities in security, commercial and trade areas. The Navy and Coast Guard Service perform tasks that require security. These activities are external and because of their unique requirements, under the control of defense organizations. An example would be the requirements of search and rescue. These kinds of tasks require expertise of and control by experienced Naval Officers with the training in management of basic maritime national interests of Colombia.

4. People

The people available to the Maritime Authority come from active duty and retired files of the Navy. The Naval personnel that work in the Maritime Authority organization are individuals that have related experience in the management of maritime activities. The structural bases for the culture and operating mechanisms of the organization is the tradition source for people in the Maritime Authority is the Navy. This integration of the Maritime Authority with the Navy has enabled the start-up of the specialization areas with the required skills and experience from the Navy. An example is in the case of hydrography and oceanography. With these sources of expertise, the Maritime Authority can be defined as an organization with military characteristics. Quoting instructions of the new organizational

strategy of a former Maritime Authority best expresses the characteristics and expectation of leadership of institution:

It is necessary to achieve a higher level of efficiency in development activities in each area with vision to change, innovate and improve, always with the unique objective to fulfill with responsibility the government policies in maritime matters.⁵⁶

In summary, people that constitute the Maritime Authority Agency are professionals of the sea whose values, assumptions and experience makeup the core of that organization. Autonomy and individual challenge is a constant characteristic because the tasks required differ from the traditional Navy tasks.

5. Technology

Technology used in the Maritime Authority organization can be divided into three major categories. First, scientific investigation involves the use of multipurpose oceanographic ships and investigation centers to monitor and forecast sea and climate conditions, develop cartography, control contamination, and maintain aids to navigation. Second, operations use the same technology as the Coast Guard and Navy to assist in the jurisdictional enforcement. A major technological tool that enhances the protection of life at sea is the C³I system. An example of this technology is the Coast Guard Station in Buenaventura schematically shown in Figure 10. This system shares information with the maritime traffic control system of the local maritime authority. The authority gives information on the status of vessels transiting the area and vessels arriving or departing from the port.

These technological system uses fix and mobile radars linked via synthetic video to the main Coast Guard Station. Communication systems are used that include satellite linkages that connect between the central and local maritime authorities. In the third category Information Technology (IT) and Information Management Systems (ITM) incorporate and manage the databases of the merchant personnel and equipment.

⁵⁶ Rear Admiral German Castro, Maritime Authority 1995.

6. Structure and Operating Systems

The variety of tasks that the Maritime Authority must accomplish characterizes the organizational structure as a machine bureaucracy. However, for activities of scientific research the structure attempts to function more as a professional bureaucracy. Tasks, such as, search and rescue and maintenance of navigational aids are performed by Naval forces and Coast Guard units. In the area of marine research and technology, the structure has special centers of operation. At the operating core there is an interrelationship between these centers that is based on skilled and standardized work with a great deal of individual autonomy. The center for investigation for oceanography and hydrography located in Cartagena is a clear example of a professional bureaucratic structure.

Technology Local Maritime Authority

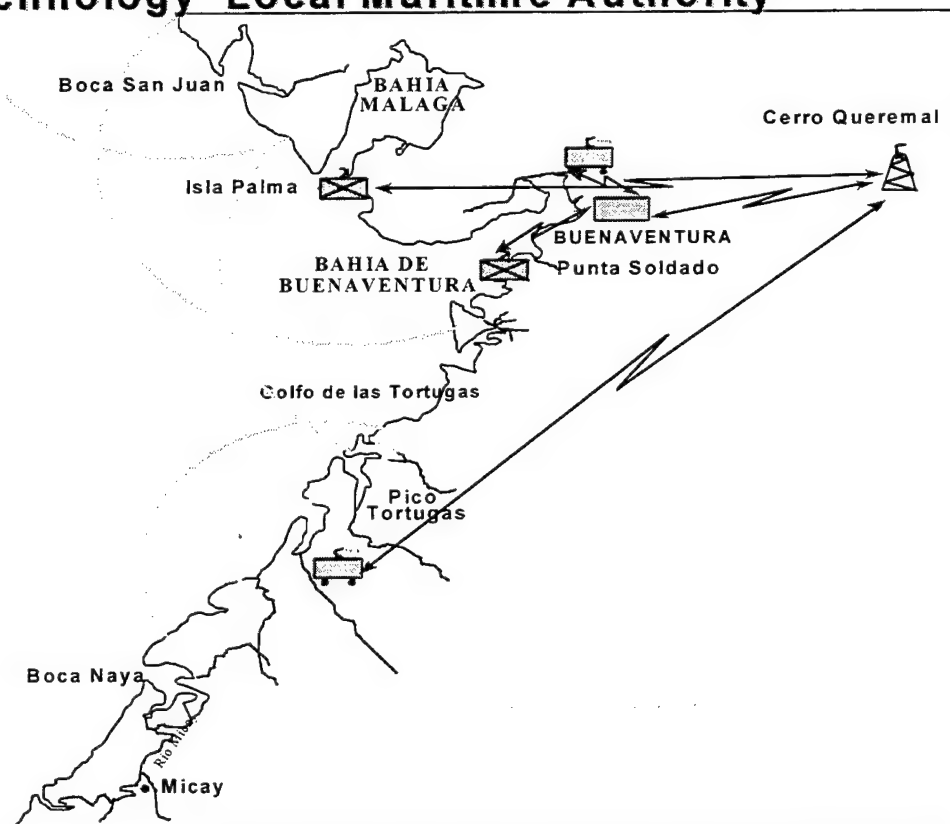


Figure 10. Technology Local Maritime Authority

Figure 11 schematizes the whole organization. Key parts of the organization are the structure dealing with maritime environment control and international relations. Because the organization has military characteristics and the strategic apex is within the Naval Hierarchy, the operating core, middle line structure, technology structure and support staff, use informal communication processes as coordination mechanisms. Communication with the strategic apex is done through military channels.

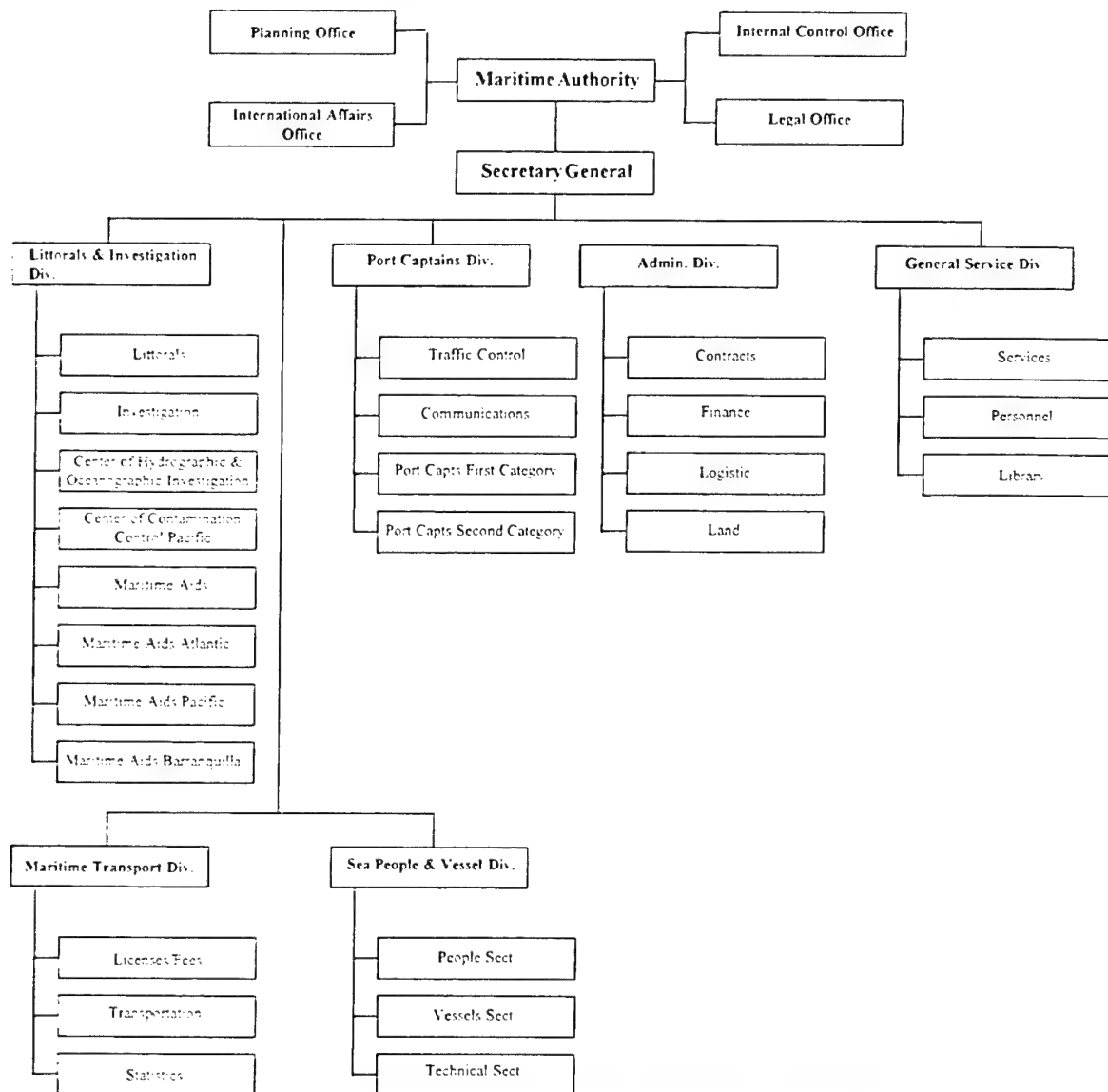


Figure 11. Organizational Chart Maritime Authority

Figure 12 shows how the operating core communicates through the port captains for environment concerns and in the context of the jurisdiction duties to the maritime authority. The operating mechanisms use existing procedures and infrastructure of the Navy. The control system is based on existing norms of internal administrative control. The Naval training facilities of the Naval Academies support the training and development programs for officers and enlisted personnel. Technical preparation is done outside the country in specialized facilities such as the U.S. Navy Cartographic School in Panama and at the educational facilities of the Spanish Navy (Hydrography).

The recruitment, selection and reward systems are essentially the same as for the Coast Guard Service, with the advantage that Maritime Authority personnel are assigned for extended periods to their jobs because of the expertise, experience and knowledge required to successfully perform the tasks.

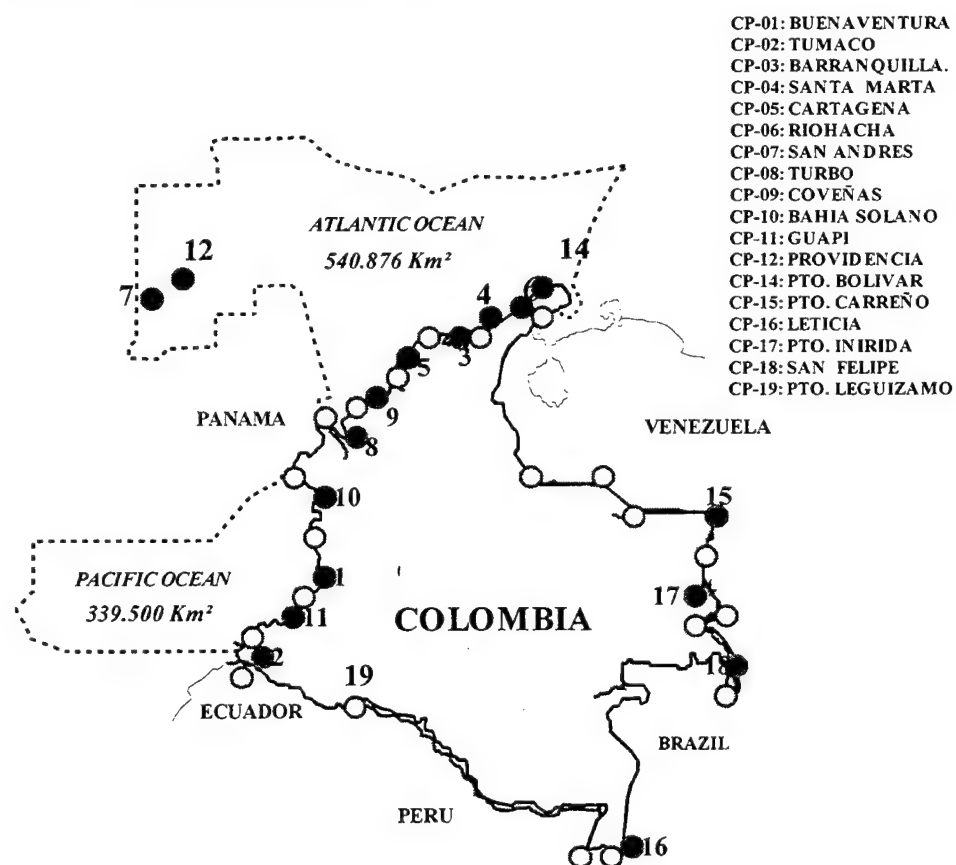


Figure 12. Port Captains

7. Culture

The culture that prevails in the Maritime Authority Organization may be described by three general characteristics. First, it has military characteristics that combine discipline and responsibility. The second characteristic is scientific challenge, and the third is the administrative management required for the control, promotion and development of maritime activities.

The military culture that is part of the organization supports the effectiveness of the Maritime Authority. Admiral Edgar Garay's survey response said:⁵⁷

The Colombian Community except in very rare occasions, has always had inland mentality. We have always lived with our backs turned to the sea. Our political classes and therefore our leaders cannot think in a different way. We have seen for many years attempts to take away from the Ministry of Defense the Maritime Agency, not with the intentions of improving things but to build bureaucracy and pay political favors. The National Navy has bravely fought to change the mentality but the response cannot be considered satisfactory. Even though with these unfavorable circumstances the Maritime Authority has performed with enormous efficiency.

The comments of Admiral Garay suggest that the maritime consciousness is found in the Navy. This Navy maximizes the development of maritime activities within a nation without a vision for the sea. This idea shows a culture of protectionism and good intentions of Navy people and that their professional careers are bound to the sea and this vision.

The responsibilities assigned at national and international levels for international community and maritime conventions, letters of agreement within marine control, research and investigation generate the second aspect of culture. This culture of people working in the Maritime Agency has a unique responsibility within the national and international context. It strengthens the attitudes of the organization that must produce outputs that protect maritime favorable sea interests. The best example is responsibilities to prevent the losses of lives with the scientific monitoring ocean tsunamis. This culture also includes the oceanographic and hydrographic functions that are a constant challenge to research and the

⁵⁷ Commandant of the Navy 1990-1991.

protection of the maritime environment. These functions require constant investigations for development and solutions.

The third aspect of culture that characterizes the organization is the administrative management of maritime activities by Naval personnel. Historically, the Maritime Authority has been part of the Navy's files. Supervision of maritime activities regulated by the Maritime Authority is to a large extent accomplished by Naval Officers. Examples of this culture are the security and technical inspections that are done periodically by Naval Officers as representatives of the local Maritime Authority. These tasks are accomplished by qualified Naval and Merchant Marine Officers, that graduate from the Naval Academy and are certified by the Maritime authority as surveyors.

The integration of these cultures forms the general culture of the Maritime Authority organization. This general culture may be interpreted as the desire to promote the use of the sea within the military values of discipline, responsibility and honor. Admiral Manuel Avendaño⁵⁸ in his answer to question number one in the survey states that:

If it is certain that political sectors have intended extraction of the Maritime Agency from the Ministry of Defense to incorporate it into the Transportation Ministry. The Ministry of Defense/Navy has had sufficient arguments to stop this ambition. Advantages include: a) organization with hierarchy, well regulated with adequate controls to guarantee an efficient performance, b) guarantee of continuity to the policies and plans of action and development, c) guarantee of not politicizing, good service without a corrupted environment.

8. Outcomes

The answers of the survey qualify the results of the Maritime Authority organization internally as excellent. Although performance indicators also may quantify the outcomes of the maritime authority as successful according to the development plans,⁵⁹ the overall outcome may fall short if a maritime consciousness, maritime vision and strategic

⁵⁸ Commandant of the Navy and President of the Colombian Oceanographic Commission, 1989-1990.

⁵⁹ Internally the Navy promotes annually a plan called "Progress" which includes the objectives to be accomplished during the year within the frame of tasks given by law 2324.

management of maritime activities are included.⁶⁰ In 1996 this assessment proved true when a lack of maritime vision in Colombia resulted in the sale of its principal merchant marine company. This removed one of the elements of maritime power from national control.⁶¹

Table 5. Outcomes Maritime Activities 1996

Scientific Research	16
New Nautical Charts	05
Serviced Aids to Navigation	44
Arrival Inspections Merchant Vessels	20,000
Maritime New Licenses	1661
Maritime Agencies Served	67
Charter Agencies Served	16
New Classification Agency	01
Shipyards Served	07
Maritime Repair Shops Served	04
Maritime Service Companies Served	11
Private Pilot Companies Served	12
Authorize or Review Maritime Routes	70
Registration of Vessels	158
Operation Licenses	244
Investigated Marine Accidents	49
Construction and Conversion	66

E. SIMILARITIES AND OVERLAPPING FUNCTIONS

Table 6 shows eleven similarities and overlapped functions of the Coast Guard and the Maritime Authority assigned by Laws 1874/79 and 2324/84. Of the fourteen duties assigned to the Coast Guard service, eleven are similar to tasks assigned to the Maritime Authority.

Actually people perform these assignments in both organizations with awareness of each others functions. The activities assigned by laws give rise to double efforts and

⁶⁰ "Colombians must see with strategic vision the use and exploitation of their seas. If Colombia does not exercise an adequate presence in her two seas, her neighbors will run over her." *Conclusions. Memorias Simposio sobre el Poder Marítimo en Colombia*, p. 135.

⁶¹ "The Flota Mercante Grancolombiana, that over fifty years sailed with Colombian Flag in the seas of the world will not continue to sail. The company sold to 60% of its shares to Transportacion Maritima Mexicana." *El Espectador*, *Diario Economico*, *La Flota no vuelve a navegar*, Internet, www.elespectador.com, January 1997.

Table 6. Similar and Overlapped Functions

COAST GUARD LAW 1874	MARITIME AUTHORITY LAW 2324	MARITIME ACTIVITY	CHARACTERISTIC
Contribute to Defend National Sovereignty	Advise Government Adopting Policies and Programs Related Maritime Activities	MD	Similar
Conduct Search & Rescue	Direct and Control Navigation. Safety Human Life Safety, Maritime Search & Rescue	Maritime Safety	Similar
Protect Maritime Environment against Contamination	Direct, Control and Encourage Scientific Research and Adequate use of the Sea. Conduct and Sentence Investigations of Contamination of Marine and Fluvial Environment.	Environment. Protection.	Similar
Protect Ships and their Crews According to Int. Law	Direct and Control General Activities related with Navigation. Safety, Human Life Safety at Sea	MS	Similar Overlapped
Contribute to Maintain Internal Order	Advise Government in Adopting Policies & Programs Related to Maritime Activities	LE, MD	Similar
Protect Natural Resources	Direct Control and Encourage Adequate use of Sea Resources	EP	Similar Overlapped
Contribute to Oceanographic/Hydrographic Investigations	Direct Control and Encourage Scientific Research	MS	Similar
Control Maritime Traffic	Coordinate with Navy Control of Maritime Traffic	MS	Similar
Contribute with State Organizations to Realize Activities at Sea	Advise Government of Regulation and Control for Development Education, Training of People at Sea. Advise Government in International Agreements, Conventions and Treaties in Maritime Topics, ensure their execution	MS	Similar
Contribute to Particulars that Realize Legal Activities at Sea	Authorize and Control the Nautical Archeology and Treasure Hunt, Celebrate Contracts	MS	Similar
All Additional that Law and Regulations Dictate	Overall Develop Activities and Programs that Related are Related to the Objective	LE, MS, EP, MD	Similar Overlapped

MD = Maritime Defense
EP = Environment Protection
MS = Maritime Safety
LE = Law Enforcement

overlap functions. This comparison also shows that both the Navy and Coast Guard organizations performs the functions of maritime activities in maritime law enforcement, maritime safety, environmental protection and maritime defense to preserve national maritime interests. In summary, both these organizations do tasks and have similar activities related to the management of maritime activities.

Another observation from Table 6 is that functions assigned to the Maritime Authority implicitly encourage the strategic planning processes required to manage the maritime national interests. Tasks given to the Coast Guard Service relate more to the operative management processes.

It is important to understand that the way that laws describe the functions opens possibilities for a range of interpretations. For example, tasks such as: "All additional that law and regulations dictate" for the Coast Guard and "Overall develop activities and programs related to the objective and goals of the Maritime Authority" lead to many possible interpretations.

In summary, Table 6 shows that both organizations perform similar tasks at different levels which implies a redundancy and probably unnecessary performance of work. To summarize this section of the study, the answers to the question of "Do the two Naval organizations overlap in their functions?" is yes.

F. COLOMBIAN MARITIME MENTALITY

An analysis of the answers to the survey will describe the Colombian maritime mentality and the priorities given to the national maritime interests. Response to the survey included comments from seven Flag Officers (one active duty, three former Commandants of the Navy, two former Maritime Authorities and one NPS graduate). Nine active duty Captains and fourteen work groups (three officers each) of Naval Officers students from the Colombian War College for a total of fifty-eight officers. A summary of the comments and principal ideas is as follows: fifty-nine percent of the answers in one way or another describe Colombia as a Nation-State without a maritime consciousness.

An analysis of the responses suggests that the generosity of the land has de-emphasized the sea. Arguments also suggest that there is a lack of unifying planning and management of the sea. Eighty-three percent of the answers agree that the government has not "ideally" located the actual Naval organizations that manage maritime activities. Sixty-nine percent of the answers justifies the current organization as a result of the internal situation of the country. Twenty-three percent of the answers agree that restructuring the Maritime Authority and the Coast Guard Service under the Navy is the best option. Twenty-eight percent suggests that a solution of integrated management of maritime activities would be the creation of a Ministry of the Sea. An important issue from the answers is that the three former Commandants of the Navy agree that the current organizations manage maritime activities well, considering the complex environment of the country. Comments of Commandants focus more on the dangers that the organizations will face if politicians are given the opportunity to interfere.

Table 7 shows the percentages of answers. Table 8 condenses the ideas in the survey for each question and deduces the Naval maritime mentality that arises from answers given to each particular question. Overall the Colombian maritime mentality can be described as immature due to the historical background of the nation and the productivity that mother nature has given the land. The maritime mentality also may be considered uneducated because from the educational point of view the Nation-State has not given importance to it in its education of future generations. This in a world where natural resources are not replaced at the rate that they are consumed.

Table 7. Percentages of Survey Answers

Total	58	100%
Without Maritime Consciousness	25	59.5%
Government Does Not Ideally Locate Actual Organization	35	83.3%
Justify Location Due To Environmental Situation	29	69%
Restructure Organization	10	23.8%
Create A Ministry of The Sea	12	28.5%

Table 8. Results of Survey Main Ideas

Do you consider that Government efficiently places the Colombian Maritime Authority? (Organic dependence from the Ministry of Defense aggregated to the Navy)	Actual Organization is Placed Efficiently. Due to a Lack of Maritime Consciousness of the Nation-State. (Navy has Kept this Maritime Interest Alive) It Avoids. The Organization to Become Politicize and Prevents Corruption within it. Helps having a Direct Control of the Organization within Military Discipline	Main Ideas are Found in Preserving the Institution from Becoming a Political Instrument of the Government. Ideals and Integrity Describes this Idea with the Awareness that there is a lack of Maritime Consciousness
Do you consider that Government efficiently places the Coast Guard Service? (Organic dependence from the Chief of Naval Operations)	Actual Organization is Placed within the Navy to Maximize the use of Scarce Resources and Equipment due to the Internal Situation of Violence that Colombia has The Navy has the Adequate Infrastructure to Support the Operation of the Coast Guard Particularly because of a Recent Developed Component	The Mentality Gathers the Concerns of a New Organization that Needs to be nourished by the Navy and at the same time Maintain the Coast Guard Units within the Navy
In countries like United States, Japan, Chile and Argentina the Coast Guard Service is under responsibility of the Maritime Authority. In the case of Chile the Maritime Authority depends of the Navy. Would you consider using in Colombia the one of these organizational schemes?	The Organization of the Foreign Countries is Based on the Developed Maritime Consciousness and Recognition by the Nation State that the Sea is Vital in their Maritime National Interest. These Foreign Countries have Political and Internal Order Stability which Allows them to have this Type of Organization Chile's Organization is the Best Organization that could be paralleled if Political Stability and Internal Order Improve	The Maritime Mentality Recognizes that there are Better Schemas to Manage Maritime Activities. The Main Concern Lies in the Instability of the Country
Which of these options do you consider best for managing the maritime activities of our country, considering the strength and weakness of our political and administrative organization Please explain. a. Maritime Authority organic dependence from Navy b. Coast Guard organic dependence of Maritime Authority. c. Maintain actual organization d. Other alternative. (please specify)	Maintaining the Actual Organization is Convenient due to the Political Instability of the Country and the High Levels of Violence Ideally having both Organizations Fused and Dependent of the Navy is the Optimal Choice. If the Internal Situation Changes	The Maritime Mentality is Characterized by the not Relying on Political Decisions or Government Agencies, but Trusting Internally their own People
At Government level what changes would you recommend that might improve the strategic management of maritime activities within Colombia's maritime national interests?	Due to the Changing Environment of a Country with Unstable Internal and Political Situations Maintaining the Actual Schema Guarantees Stability in the Present Strategic Management Recommendations Point in an Ideal Way to Maintain the Naval Organizations Managing Maritime Activities under one Head Structure	The Maritime Mentality Under Military Structure Defends the Naval Organizations Management Under Values of Honor, Duty Country
What other aspect do you consider I should cover in this academic exercise?	Study the Possibility of Implementing a Maritime Ministry that Gathers all the Maritime Activities to Promote Maritime Consciousness and Ensure Colombia a Maritime Nation	Maritime Mentality Idealizes the Management of Maritime Activities outside of Colombia

The only maritime mentality that may developed is in people that have worked with the sea, understand its potentials. In the Naval Officers answers to the survey it may be observed that this in fact corresponds to a maritime mentality that idealizes the sea under military values of honor, duty and country. In can be observed that the environment of a country characterized by political and social unrest makes people of the Naval organizations unique and protective of a country without a maritime consciousness. Naval organizations are considered optimal under the current Nation-State mentality and the instability of the nation's environment. Appendix C presents some quotations from the survey that supports these interpretations.

IV. FOREIGN MARITIME AND COAST GUARD SERVICES

This chapter is a study of foreign Maritime Authorities and Coast Guard services. It also examines the background of the priorities given to their maritime national interests. This chapter also highlights the variables used in the Dynamic System Model. The purpose of this chapter is to underline common parameters in the organizational design and strategic management of foreign maritime organizations consulted in the creation of the Colombian Coast Guard. Table 9 is given to support in general terms the priorities of maritime national interests of the countries in this study.

Table 9. Maritime Related Data⁶²

	CHILE	COLOMBIA	JAPAN	USA
Fish Catches Thousand of Metric Tons (1992)	6501.8	158.9	8460.3	5602.9
Merchant Shipping Thousand gross register tons(1993)	624	238	24,248	14,087
Jurisdictional Waters	3,400,175 km ²	880,376 km ²	4,230,000 km ²	Did not sign New Law of the Sea
Navy Major Vessels	55	12	114	755
Patrol Vessels Coast Guard	50	30	518	230
Aircraft	78 Navy & CG	10 Navy & CG	70 Coast Guard	209 Coast Guard
Navy Personnel	22,500	17,000	43,000	426,700
Maritime Authority and Coast Guard Personnel	1,500	8,00	12,000	37,300

⁶² United Nations, *Statistical Yearbook, Fortieth Issue 1993*, Data as of 31 December 1994, United Nations, New York, 1995, p. 350-535./The International Institute for Strategic Studies, *The Military Balance 1996/97*, Oxford University, London, 1996.

A. CHILE - MARITIME TERRITORIAL SERVICE

The year after Chile proclaimed its independence from Spain in 1811, its first Government began international commerce. Commerce was by sea because of geographical characteristics of Chile. The newborn nation required normalization of the maritime port activities. In 1813 the government issued regulations for port management. Topics included the responsibilities given to the Navy for the inspection of commercial vessels, police activities in port, navigation aids and the maintenance of port installations. Regulations incorporated norms used by the Spanish Navy. King Charles IV of the Borbon Dynasty originally established these norms, which were used in all the services of the Spanish Navy, in 1793. Their stipulations included the norms and responsibilities of the port police and the port captains and were enforced by the maritime, fluvial and lacustrine police.⁶³ The Chilean Nation with these actions understood the value of the sea using the experience of a prestigious Navy to establish its control.

Law 292 signed on August 30, 1953 gives a new direction to the service by restructuring the organization and assigning it a General Director, Governors, Maritime Delegates, pilots, inspectors and sea people.⁶⁴ In 1978 Law 2222 reinforced the organization by recognizing the General Director as the Maritime Authority of the nation Law 2222, known as the "Law of Navigation" regulated all the norms related to navigation in Chilean waters and recognized the Service as the maritime authority of the nation under the Navy.⁶⁵

1. Maritime National Interests

Historically maritime national interests in Chile have been set at a high priority. For Chile the sea represents survival of the Nation-State. Today Chile's maritime national interests are viewed from a new schema. The Commandant of the Chilean Navy, Admiral

⁶³ Comments by Captain Heinz Pearce Naval Postgraduate School student from Chile.

⁶⁴ "Exert maritime management of the littoral and the jurisdictional waters, professional and technical control of the merchant marine as well as the other national maritime activities." Mission statement of the Maritime Territorial and Merchant Marine Service. Resolution C.J.A. Ord. N. 6491/1 del 22. Feb. 1990.

⁶⁵ "The Maritime Territorial Service depends militarily and organically from the Navy Headquarters without detriment of his autonomy and decisions that the organic law establishes." Ibid., p. 4a.

Jorge Martinez Bush, has developed a new method of incorporating the influence of the sea into the development of the country. "Oceanopolitics" is defined by its author, Admiral Martinez, as:

"... the consideration of the existence of the ocean upon geography and the influence that this existence has over political decisions."⁶⁶

The general purpose of oceanopolitics is to foster:

...political actions to recognize the influence that sea has in the vital cycle of a Nation-State.

From these ideas, maritime national interests can be considered the ocean space for development and growth of the Nation-State. It also embraces the following criteria:

- The citizen awareness of the dependents on the sea
- Ocean space as a volume of four parts: surface, oceanic mass, seabed and ocean floor
- National and international regulation of the oceanic spaces
- Conceptualization of the ocean medium as a non renewable resource in its physical, chemical and biological properties
- Ecological code for contamination issues
- State administration of the resources of oceanic spaces

With these concepts and criteria the Chilean Navy manages Chilean maritime activities through its Maritime Territorial Service.

2. Maritime Strategic Management

The *environment* of the Maritime Territorial service is the nation's consensus in defining itself as a maritime nation. Chile has 8000 km of coast from the border of Peru down to the South Pole. Two of the world's most important inter-oceanic routes pass the

⁶⁶ Clase magistral dictada por el Almirante Jorge Martinez Bush, *La Oceanopolítica en el Desarrollo de Chile*, Mes del Mar, 1993, p. 5-13.

maritime territory between the Atlantic and Pacific oceans (Drake Sea and the Magellan Strait). The ports of Chile handle 96% of its commercial activities and represent movement of forty million tons of goods with an approximate value of \$ 20.000 million dollars annually.⁶⁷

Within this context, *key success factors* included in the mission statement of the service are:

Watch over the safety navigation in marine, fluvial and lacustrine spaces; for protection of human life at sea, rivers and lakes; for goods and resources of the maritime national zone, coast and littorals; in the same way, for the protection of the maritime national interests of the nation, with the purpose of contributing to the development of the maritime power of the nation.⁶⁸

Tasks that derive from the environment and maritime vision of development of maritime power include: maritime safety, marine environment protection, law enforcement and defense maritime activities. For these tasks the organization has a professional bureaucracy structure shown in Figure 13. The support staff to the general director has a department exclusively dedicated to maritime national interests. This is an important characteristic of the organization. The people of the organization come from the files of the Navy: they are educated and have unique skills to serve in the Maritime Territorial Service as an integral part of the Navy. The use of technology in the service includes innovation such as information is updated daily on maritime traffic through the Internet. Communication systems employed are considered essential in maritime security issues. The importance given to the maritime national interests derived from the maritime consciousness of the nation. This makes the culture of the Navy foster the maritime development of the nation. This is an efficient management of maritime activities. Table 10 shows the organization's output in a day's labor.

⁶⁷ Ibid., p. 16.

⁶⁸ <http://www.directmar.cl/CENTRAL/AMBITOS/MISION.HTM>

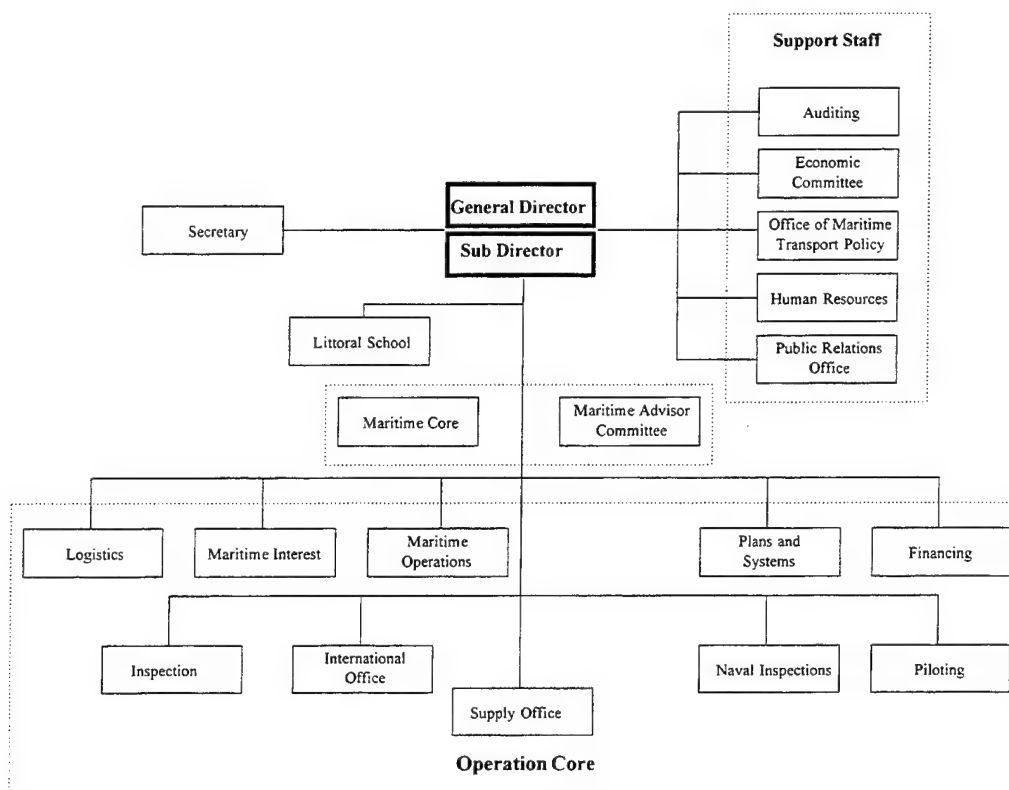


Figure 13. Organizational Chart Chilean Maritime Authority

Table 10. An Average Maritime Territorial Service Day

Saved Lives	2
Assisted People	6
Completed Search and Rescue Cases	2
Responded to Oil and Chemical Spills	1
Inspected Commercial Vessels	250
Boarded Large Vessels	3
Seized Marijuana	0.11b
Seized Cocaine	0.2
Interdicted Illegal Aliens	1

a. *Organizational Design*

Standardization characterizes the organization design of the service. This design is a professional bureaucracy where the power of the Maritime Authority is decentralized from the Navy organization for maritime functions. A support staff aids the Authority in the maritime activities managing process.

The design includes the Maritime Authority as the only head of the Maritime Territorial Service for the purpose of conducting the specialized tasks of managing maritime activities within the vision of the Navy.

b. *Factors*

Integrating the maritime consciousness of the Nation-State into the maritime vision of the service makes strategic management of maritime activities integral to the political actions of the government. This unique factor gathers the management of maritime activities and integrates the sea into their vital cycle.

B. JAPAN - MARITIME SAFETY AGENCY

After World War II, maritime traffic routes, ports and harbors around Japan were blocked by a large number of floating mines or sunken ships. Many navigation aids facilities were destroyed or did not work properly. Bases for maritime safety had ceased to exist. At the same time, with the disappearance of an Imperial Navy that was responsible for protecting the sea, the sea areas around Japan became infested with illegal activities. The allied forces assessed the situation and recommended the establishment of an integrated maritime safety organization.

For Japan, a country surrounded by water, the ocean is an avenue for trade and commerce and supplies essential resources for the nation's existence. Consequently, the Japanese Government established the Japanese Maritime Safety Agency (JMSA) on May 1,

1948.⁶⁹ In July of 1954, the Police Reserve Force and Maritime Guard Force were separated from JMSA and assigned to the Ministry of Transportation. These two forces became the Maritime Self Defense Force or the Japanese Navy. Thus, in 1954 Japan separated its Naval power from the management of maritime activities. This historical change requires a description of how maritime national interests are determined and how Japan strategically managed these interests.

1. Maritime National Interests

Japan is an island country and relies heavily on the sea. For Japan, maritime national interests play a fundamental role in its existence as a Nation-State. Japan has the largest merchant marine fleet in the world. Japan also has the second highest fish catches in Asia after China. Japan assigns high priorities to its maritime national interests and a high priority in Japan's national interests. From the data of Table 9, it can be observed that Japan relies largely on the sea economy and favorable sea interests. To protect their national interests and manage maritime activities in its jurisdictional waters, the Japanese Self-Defense Force and Maritime Safety Agency are equipped as shown in Table 9. For a country dependent on the sea economy, protection of the sea is a survival issue. Japan values favorable sea interests and maritime consciousness and it is vital to maintaining the cohesion among all maritime interests.

The maritime power that Japan uses to preserve its national interests relies on the two maritime agencies. The Maritime Self Defense Force is the organization in charge of national security issues at sea. The Maritime Safety Agency directs the maritime management activities of law enforcement, maritime safety, environmental protection and also has limited defense tasks.

2. Maritime Strategic Management

The Japanese Maritime Safety Agency's environment is the Japanese jurisdictional waters (Figure 14). Many foreign and national ships pass or enter these jurisdictional

⁶⁹ Historical information send by Commander Kenichiro Kay, Foreign Liaison Officer International Affairs Division JMSA, letter dated 29, August 1996.

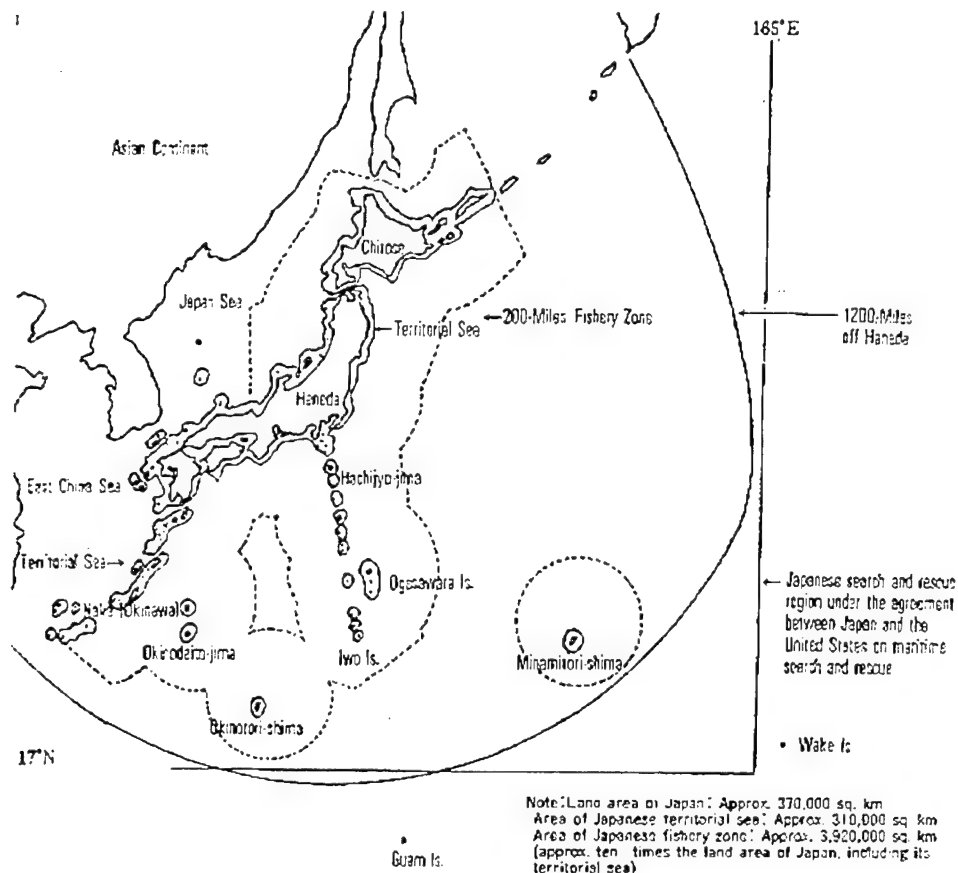


Figure 14. Japanese Maritime Safety Agency's Environment

waters. Japanese waters contain rich fishing grounds, and foreign vessels from neighboring nations operate in them.

Within this context the Japanese Maritime Safety Agency *key success factors* encompass the high value given to their maritime national interests. The Japanese maritime vision drives their strategies, goals and objectives and is "...to keep the sea safe, clean and enjoyable for future generations."⁷⁰ This vision requires the JMSA to execute *tasks* to control and manage Japanese jurisdictional waters and prevent or eliminate illegal acts and ensure order and security at sea.

Specialized skills and training characterize the *people* in the organization. To train human resources, the organization has the Japanese Safety Academy and Maritime Safety

⁷⁰ Public Relations Office, *Japanese Maritime Safety Agency*, Pamphlet, Tokyo, 1996, p.1.

School. These institutions provide education and training in areas of jurisprudence, public administration, navigation science, communication engineering, operations and navigational systems, information and ocean science. People in JMSA are prepared with these skills to fulfill the expectations and challenges presented by the environment.

State of the art *technology* characterizes the Japanese Maritime Safety Agency. Navigational aids such as the maritime traffic information system uses radars linked to computers in the main ports of Tokyo, Osaka, Nagoya Ko to provide information on maritime traffic. This technology is used to control vessels' traffic to ensure the safe and efficient operation of the vessels. Systems such as the Japanese Ship Reporting System (JASREP; shown in Figure 15) and the Global Maritime Distress and Safety System

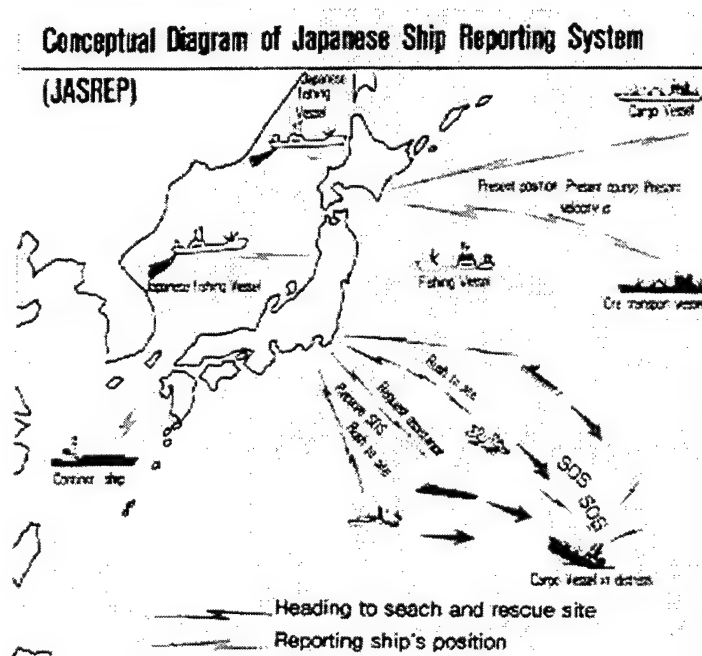


Figure 15. Japanese Ship Reporting System

(GMDSS; shown in Figure 16) monitor the movements of vessels and conduct rapid search and rescue operations when a maritime distress occurs.

GMDSS

The Global Maritime Distress and Safety System (GMDSS) has been introduced globally since February 1, 1992.

It is a new maritime distress and safety communication system using the latest satellite communication technology and digital communication techniques.

GMDSS is composed of multiple systems, such as COSPAS (SARSAT), the global wide distress and safety transmitting satellite and NAVTEX, a narrow band transmitting broadcast service providing maritime safety information.

GMDSS promptly obtains distress-related information from vessels at sea, as well as provides maritime safety information by operating communication facilitated with this system.

Conceptual Plan of GMDSS

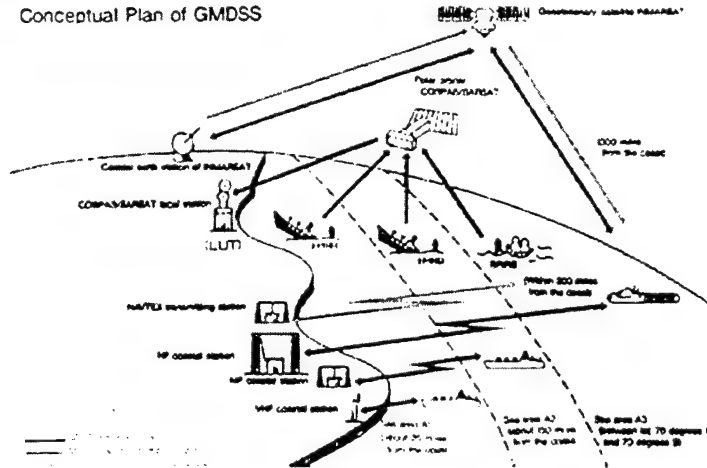


Figure 16. Global Maritime Distress and Safety System

The *structure* used by the Maritime Safety Agency, as shown in Figure 17, is characterized by an operating core of eleven regional organizations directly reporting to the strategic apex (Headquarters). This is supported by a technostucture and specialized staff. This type of organization produces decentralization in a complex environment where support rests in the professionalism of the organization people.

Their mission statement reveals the *culture* of the organization:

It is our mission at the Japanese safety agency to protect our precious seas and preserve it for future generations.⁷¹

The culture of the organization focuses on protecting and managing present resources in a sustainable way. Outcomes are published annually in a Report on Maritime Safety every March. Results are presented to Japanese society in two main areas. First, major incidents related to maritime safety, disaster prevention and response, preserving the marine environment, response to maritime crime and promotion of measures to ensure the safety and growth of marine leisure are published. The second part covers topics such as:

⁷¹ Ibid., p.1.

maritime safety trends, maintaining security at sea, ensuring maritime traffic safety, maritime search and rescue, protection of the marine environment and maritime disaster preparedness and response, oceanographic surveys and provision oceanographic information, current state of operations regarding aids to navigation and finally international activities related to maritime safety.⁷²

Outcomes are summarized in Table 11 for an average day of management of maritime activities that are directly related to the culture of the Japanese Nation-State and its maritime vision to preserve the sea for future generations.

Table 11. An Average Japanese Safety Agency Day⁷³

Saved Lives	5
Assisted People	12
Completed Search and Rescue Cases	5
Responded to Oil and Chemical Spills	3
Inspected Commercial Vessels	305
Boarded Large Vessels	5
Seized Marijuana	2 lbs.
Seized Cocaine	3 lbs.
Interdicted Illegal Aliens	1 every week

a. Organizational Design

The area in which the Japanese Maritime Safety Agency has major strengths is in organizational design. Decision-making power and highly trained people who manage maritime activities are centralized. A single organization in charge of maritime safety activities gives that institution a clear definition that can adapt to the Japanese environment and context of its jurisdictional waters. Using this design for the professional bureaucracy organization efficiency and effectiveness is achieved in the complex sea environment of their jurisdictional waters and conditions of Japan.⁷⁴

⁷² Japanese Maritime Safety Agency, *Annual Report on Maritime Safety*, Tokyo, March, 1996, p. 1-68.

⁷³ Ibid., p. 1-68.

⁷⁴ "Japan's low level of turmoil reflects its ingrained tradition of consensus, as well as its dependence on a service economy that would suffer from civil disorder." Political Risk Services July 1, 1996, CD database, Dudley Knox Library, Naval Postgraduate School.

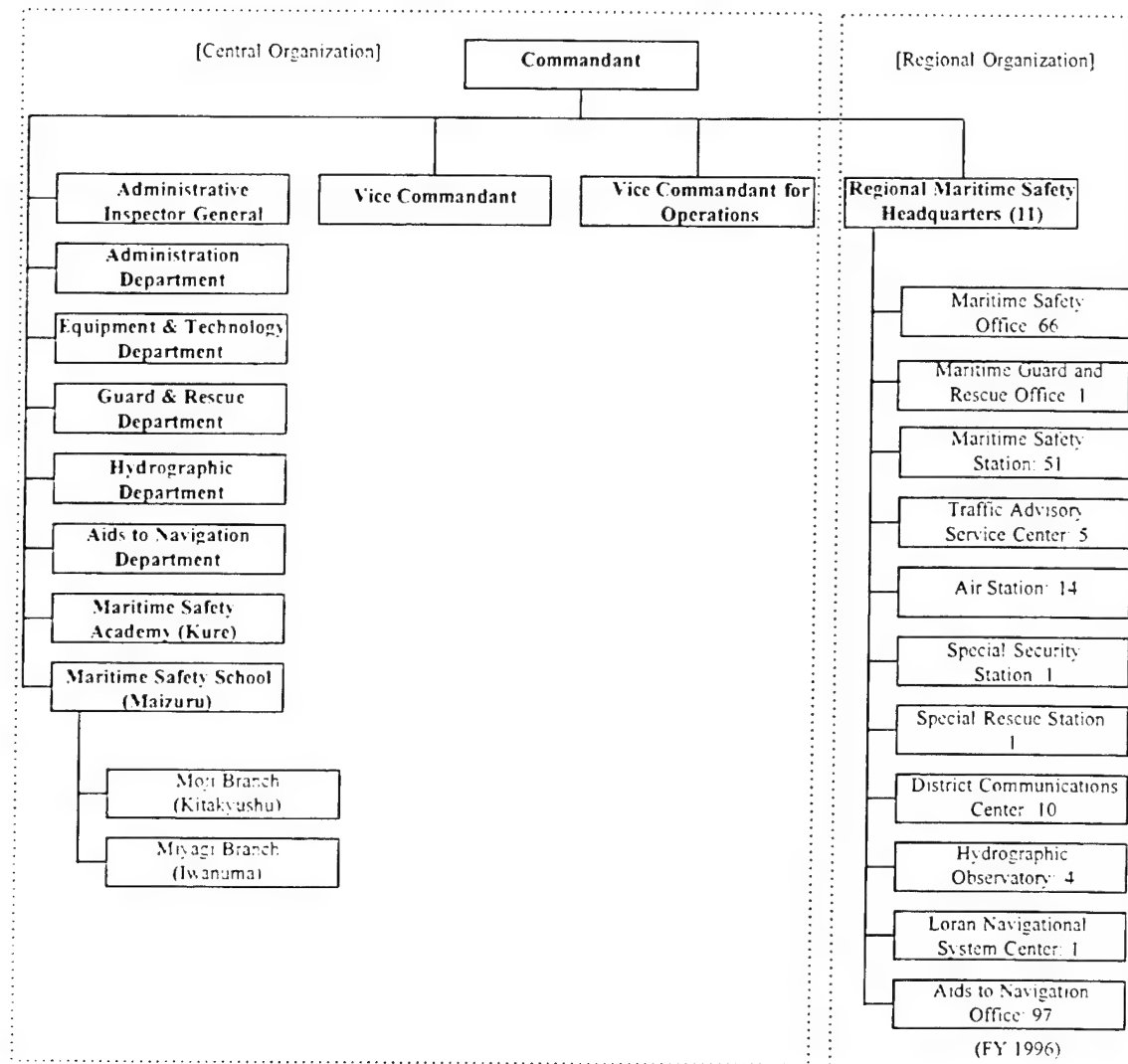


Figure 17. Japanese Maritime Safety Agency

b. Factors

The factors included in the strategic management of Japanese maritime activities are: their maritime vision of protecting their sea for future generations that gives an unambiguous and long term objective; their understanding of their maritime national interests rooted in their maritime consciousness; and their awareness that strategic management of maritime safety activities requires special skills and training.

C. UNITED STATES - COAST GUARD SERVICE

The United States Congress established the Coast Guard Service in 1915, when two organizations, the Revenue Cutter Service and the Lifesaving Service were merged. The U.S. Government made this new service part of the military forces. But the services were assigned to work under the Treasury Department. The United Coast Guard Service acquired the functions of its successor with the Revenue Marine created in 1790. The Revenue Marine had labored as a federal maritime agency responsible for the enforcement of customs laws. To create this Agency, Alexander Hamilton, the first Secretary of the Treasury, requested ten cutters from Congress and, at his insistence, its officers were given military rank.

In 1891, Secretary of Treasury Louis McLane recognized the potential use of the cutters for rescue tasks especially in winter months. He set up the services to help distressed vessels. Because of the service success, it was assigned to enforce other laws, such as navigation laws and prohibition against wrecking, plundering, piracy and slave trade. During the Civil War and the Spanish-American War, cutters were involved in sea confrontations against opponent forces as part of the regular military forces of the Union Forces.

After years of shipwrecks and much loss of life, the Congress in 1844 appropriated resources for lifesaving purposes. In 1854 there were 137 lifeboat stations along the two coasts. During World War I and World War II, cutters were transferred to the Navy to escort merchant convoys. Following demobilization after the wars the Coast Guard reassumed its peacetime duties. These duties included marine safety, law enforcement, environment protection and national defense. In 1965 the service became involved in the Vietnam War with a number of patrol boats assigned to the Navy for inshore patrol force against the smuggling of arms and other munitions.⁷⁵ In 1967, the U.S. Government transferred the Coast Guard from the Treasury Department to the Department of

⁷⁵ The Encyclopedia Americana, International Edition, Grolier Incorporated, Danbury, Connecticut, 1994, p 147-151.

Transportation. Essentially the history of the Coast Guard Service has made it the only United States Armed Force not assigned to the Department of Defense. This gives the Nation-State the capability of managing maritime activities within United States maritime national interests. The U.S. Coast Guard organizational chart is shown in Figure 18.

1. Maritime National Interests

The United States publishes its maritime national interests in a guide document related to national security policy signed by the President of the United States of America.

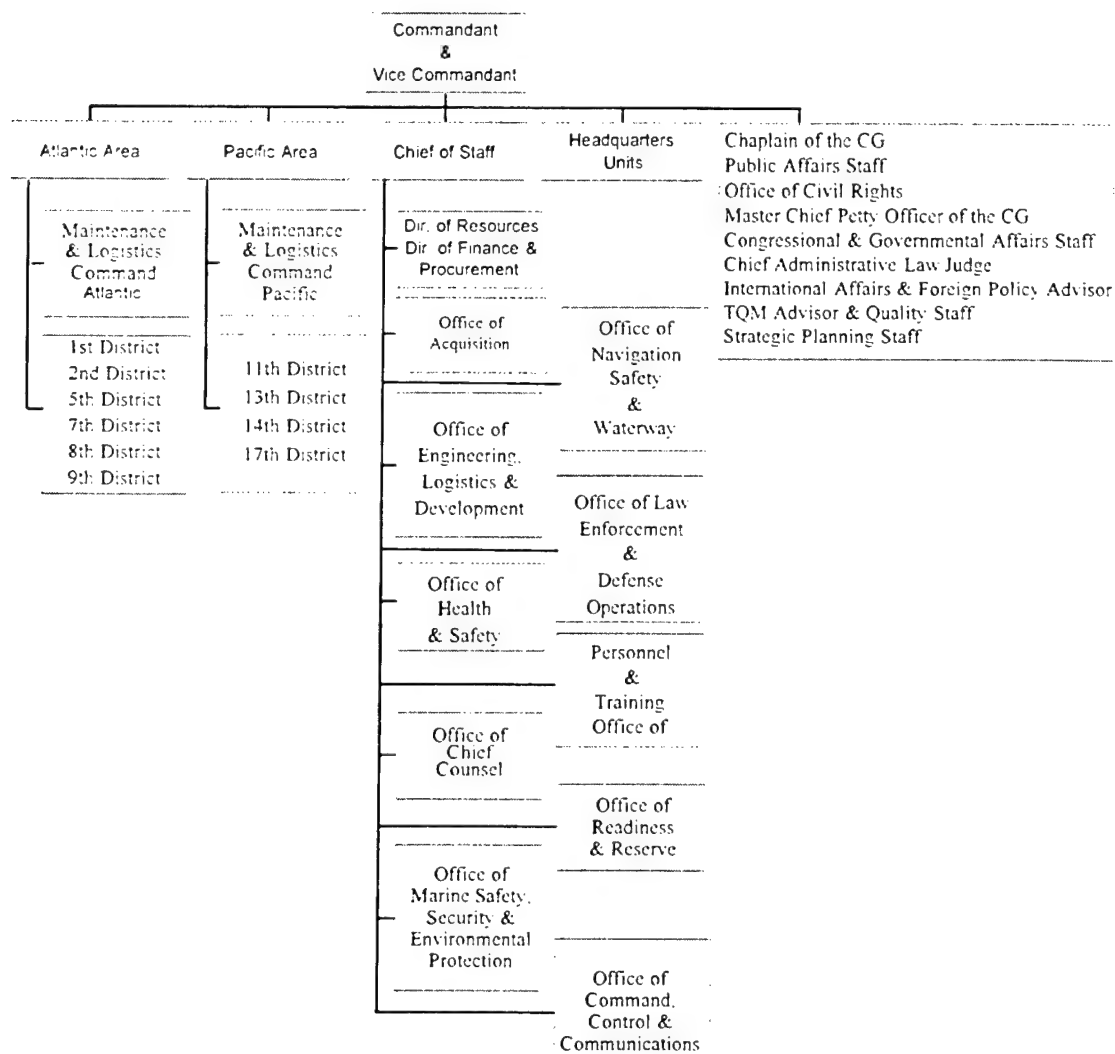


Figure 18. Organizational Chart United Coast Guard

"National Security Strategy of Engagement and Enlargement" is the actual document that guides this policy. The values given to national interests include maritime national interests. Topics such as overseas presence, deciding when and how to employ U.S. Forces, the environmental and sustainable development, promoting prosperity at home and various economic guide lines are include in the document along with the importance of the management of maritime activities.⁷⁶

The essential factor of maritime national interests is the maritime consciousness of the American Nation-State. This included statements such as:

The United States is inevitably a maritime nation and the United States and its Navy have inescapable global responsibilities,"⁷⁷

This clearly asserts the importance of the sea. "[F]orward from... the sea" is the strategic concept that U.S. Naval Forces to protect the nation interests.

The purpose of U.S. Naval Forces remains to project the power and influence of the nation across the seas to foreign waters and shores in both peace and war. ...Vital interests, those interests for which the United States is willing to fight are at the endpoint of 'highways of the Sea' or lines of strategic approach that stretch from the United States to the farthest point of the globe.⁷⁸

The previous stated strategy justifies the priorities given by the U.S. to maritime national interests. The Navy and Coast Guard Service manage using the means shown in Table 9. The national security strategy is the frame of reference for the strategic management of maritime activities by the Coast Guard Service.

2. Maritime Strategic Management

I envision the Coast Guard as the world's leading maritime humanitarian and safety service. I view us as a strong contributor to our national security through all of our missions especially maritime law enforcement and our role and responsibilities as one of the five armed forces of the United States.

⁷⁶ The White House, *A National Security Strategy of Engagement and Enlargement*, Washington, D.C., February, 1996, p.1-45.

⁷⁷ James D. Watkins, *The Maritime Strategy*, Annapolis: U.S. Naval Institute, January, 1986, p.4.

⁷⁸ Department of the Navy, *Forward... From the Sea*, Washington, D.C., 1994, p.1-2.

We are a professional organization whose personnel are proud of their traditions as lifesavers, guardians of the sea and military service. We will be an organization that epitomizes total quality management.⁷⁹

Within this *context* following national interests, the Commandant of the U.S. Coast Service projects the following *key success factors* as the vision statements to encourage effective employment of maritime power.⁸⁰

- Be professionals and remain proud of our reputation as Lifesavers and Guardians of the Sea and Armed Forces
- Be the world's premier maritime service
- Be leaders in our day to day lives and performance of our duties
- Be committed to Diversity and support for all of our people
- Be committed to our values of Honor, Respect and Devotion to Duty
- Above all, live our motto - Semper Paratus - In all we do

Figure 19 shows the maritime jurisdiction in which the U.S. Coast Guard operates and the structure that characterizes the organization. The U.S. Coast Guard has responsibilities on both the Atlantic and Pacific coasts and a decentralized structure, complex organization, and highly qualified people to meet those responsibilities. The U.S. Coast Guard has assets such as ships, aircraft, boats and shore stations to support the operating core and to respond to tasks and program areas.

These tasks related to a vision of carrying out economic, environmental and humanitarian missions, while serving as an integral part of U.S. national security policy. Also, *tasks* relating to drug interdiction, illegal migration and pollution are the principal

⁷⁹ Admiral Robert B. Kramer, *Commandant's Direction Introduction*, Internet, <http://www.uscg.mil>, USCG Home Page, July 24, 1996.

⁸⁰ The U.S. Department of Transportation within his structure has the Maritime Administrator that manages and encourages maritime activities relates to merchant marine, ship construction and port developments.

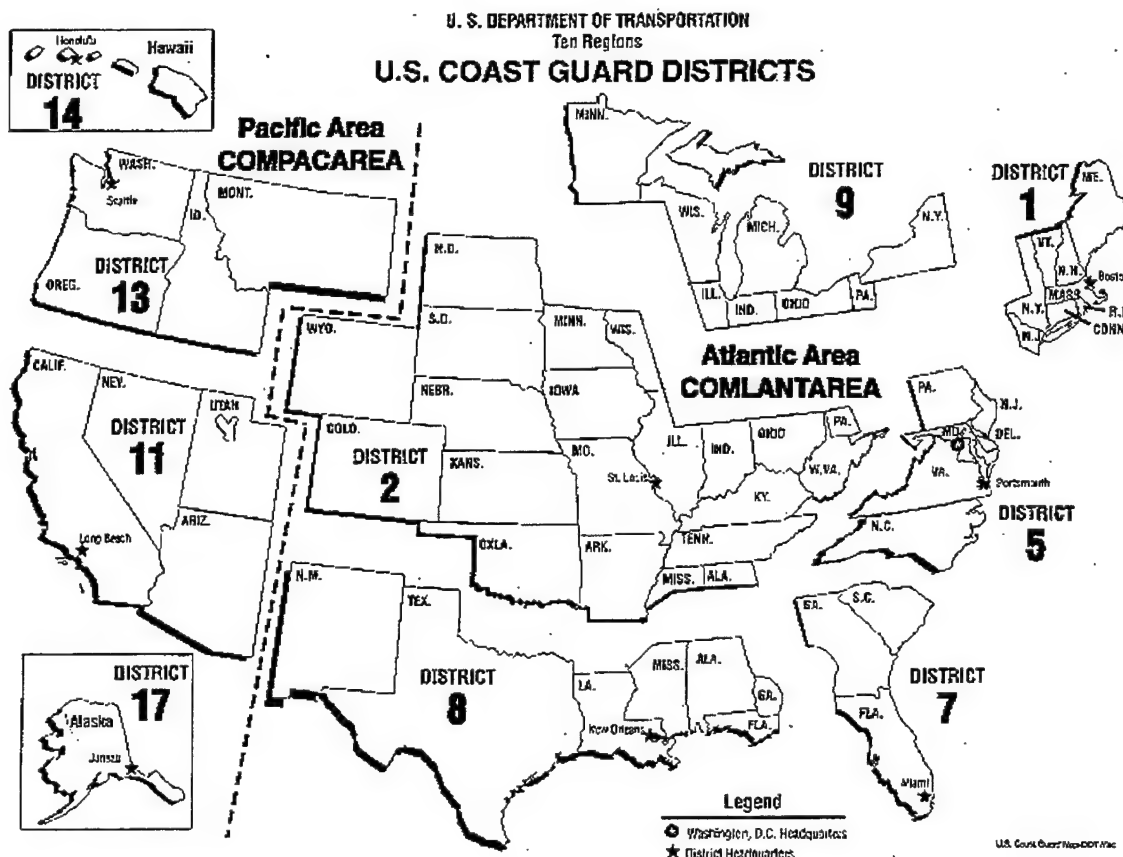


Figure 19. Maritime Jurisdiction

focuses in the Coast Guards role of maritime safety, marine environmental protection, maritime law enforcement and national security.

People in the U.S. Coast Guard Service are characterized by their service to the American public and by high professional standards. Professionalism is gained through education and training.

Technology is an important factor that serves to integrate an organization. Figure 20 is an example of technology that links sea vessels to the district or group offices. With a culture founded on service to the American people and protection and management of maritime national interests, the outcome matches with the strategic management of the maritime activities.

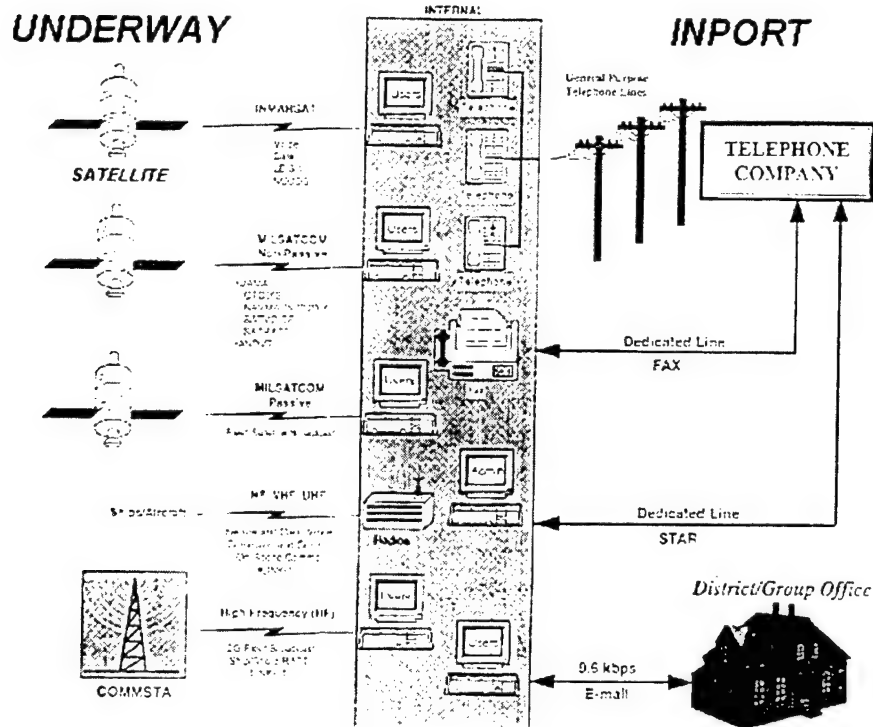


Figure 20. Technology Links Vessels to District and Group Offices

Today the U.S. Coast Guard Service is considered as the world's premier maritime service.⁸¹

Table 12 shows an average U.S. Coast Guard day.

Table 12. An Average U.S. Coast Guard Day

Saved Lives	14
Assisted People	328
Saved in Property	\$ 2,500,000
Completed Search and Rescue Cases	13
Responded to Oil and Chemical Spills	34
Inspected Commercial Vessels	64
Serviced Aids to Navigation	150
Investigated Marine Accidents	17
Boarded Large Vessels	90
Seized Marijuana	421 lbs.
Seized Cocaine	165 lbs.
Interdicted Illegal Aliens	11

⁸¹ Internet, <http://www.uscg.mil>, USCG. Home Page, *Whenever America Needs Us*, February, 1997.

a. *Organizational Design*

The strength of the U.S. Coast Guard organization design derives from the professional work of its people. As a professional bureaucracy, the institution relies on the coordination and standardization of skills. These skills are achieved through formal training. With trained specialists in management of maritime activities, the organization design is instrumental in protecting U.S. maritime national interests.

b. *Factors*

Factors included in the strategic management of the U.S. Coast Guard Services are:

- Identity as a maritime nation with a maritime vision of protecting their sea as the world's premier maritime service. This gives unambiguous long term goals and objectives
- An understanding of their maritime national interests rooted in their traditions of lifesavers
- Commitment, consistency and determination to serve the American people

D. *COMMON PARAMETERS*

An analysis of these foreign maritime organizations from the organizational perspective and using the Dynamic System Model shows common parameters in three major characteristics; organizational design, strategic management and priorities of maritime national interests.

1. *Organizational Design*

The organizational design of the foreign services relies on trained professionals forming a recognized community within the nation and the Navy. The operating cores of the organizations are decentralized. The design incorporates in all structures the necessary training and development to generate a concentration of the skills required to perform as a professional.

The organizations use a support staff to cope with complex environments that require coordination and other maritime activities such as fisheries and port management. The following are the common factors identified in this study:

- Maritime Authority includes the operating core in the organizations
- Organizations are considered as public servers of the Nation-State
- Standardization of skills in the operating core through training centers related to management of maritime activities
- Structure of organization are configured as professional bureaucracies
- Technology supports tasks with an emphasis in maritime safety
- Organizations configure structures to manage the four general areas of maritime activities: maritime law enforcement, maritime safety, environmental protection and maritime defense
- Organizations include military structure characteristics

2. Maritime Management

The management processes of the foreign services are characterized by consistency. All the organizational parts of the services work toward the same overarching objectives and purposes. These objectives are related to political actions taking place in each nation regarding the adequate use of the sea. The strategic management processes in these countries have forced a proactive and conscious use of their environments. The strategic apexes of these organizations are engaged in political processes directed toward the future. Common factors include:

- A long term maritime vision with clear maritime national objectives
- An understanding of the maritime environment that identifies trends of the organization with support of political actions for management of maritime activities for the benefit of the Nation State

- Grounding people, tasks, structure and technology in the professionalization of the organization and consider their work as a lifetime career

3. National Interests

Making political actors aware of the importance of the sea is the most important factor that sets high priorities for maritime national interests. These key factors project the vision, objectives and goals of the organization. From these organizations, this author observes that defense of the sea is considered a survival issue for maritime nations. This fact defines the essence of their existence. Sea economies represent survival and vital issues because the sea is one of the primary sources of a maritime nation's national income. These nations' vision statements directly relate favorable sea interests to the protection of the sea for the future generations. Finally maritime consciousness integrates the whole of their national interests. These nations have an awareness of the value of the sea. Table 13 summarizes the author's perception of the priorities given to each country maritime national interest. Table 14 is summary of the common parameters found in management of maritime activities.

Table 13. Comparison of Priorities of Maritime National Interests

Basic Interest at Stake	COUNTRIES			
	Chile	Colombia	Japan	United States
Defense of the Sea	Survival	Vital	Survival	Survival
Sea Economy	Vital	Major	Survival	Vital
Favorable Sea Interests	Vital	Major	Vital	Vital
Maritime Consciousness	Vital	Peripheral	Vital	Vital

Table 14. Common Parameters

Organizational Design	Maritime Strategic Management	National Interests
Operating Core Within Organizations	Long Term Maritime Visions to Preserve Sea for Future	Defense of Sea Considered Survival Issue
Professional Bureaucracies	Purpose or Mission aligned from the Priorities Given to Maritime National Interests	Maritime Safety Relates Directly to Maritime National Interests
Public Service and Defense Organization with Military Characteristics	Shared Vision as Public Servers in Maritime Safety and Maritime National Defense	Awareness of Value of the Sea Maritime Consciousness
Technology Largely Supports Maritime Safety	Commitment, consistency and determination in the use of Sea	Sea Economy
Structure Configured to Manage Law Enforcement Maritime Safety, Environmental Protection and Maritime National Defense	Vision, purpose and core values are directed towards preserving the sea as public servers	Maritime Power supports interests

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis of the organizations, similarities and overlapped functions, restructuring the Colombian the Colombian Maritime Authority and Coast Guard Service would enhance management of maritime activities within Colombia's maritime national interests. It may also provide an alternative for influencing the priorities given to the Colombian maritime national interests. Foreign navies use common parameters to manage maritime activities in organizational design, strategic management and setting priorities in maritime national interests. The author recommends incorporating these parameters into the Colombian Naval organizations to enhance management of maritime activities. The suggestion is to produce a pattern of decisions to integrate goals, policies and actions under the Colombian Navy organization.

A. CONCLUSIONS

This section includes conclusions derived from analysis of Colombian Maritime Authority and Coast Guard Services, Japanese Safety Agency, United States Coast Guard Service and Chile's Maritime Territorial Service with the use of national interests' theory and a Dynamic Systems Model.

- Political actions with awareness of the importance of the sea to a Nation-State are the most important factor in setting the priorities of maritime national interests.
- Establishing priorities given to maritime national interests are key success factors to formulate a maritime vision for a Nation-State.
- Integrating the maritime consciousness of the Nation-State into the maritime vision of the maritime organizations makes strategic management of maritime activities integral to the political actions of a government.
- Unambiguous long term goals and objectives in maritime organizations derive from the identity of a country as a maritime nation.

- A single organization in charge of maritime safety activities with trained specialists is instrumental in protection of maritime national interests. This type of organization gives an institution a clear definition for their organizational design that can adapt to the maritime environment.
- Survey results show that eighty-three percent of the respondents agree that the government has not “ideally” located the actual Naval organizations that manage maritime activities. Sixty-nine percent of respondents justify the current organization as a result of the internal situation of the country. Twenty-three percent of the respondents agree that restructuring the Maritime Authority and the Coast Guard Service under the Navy as the best option. Twenty-eight percent suggest that a solution of integrated management of maritime activities would be the creation of a Ministry of the Sea.
- Former Commandants of the Navy agree that the current organizations manage maritime activities well, considering the complex environment of the country. Comments based on Commandant’s experience focus more on the dangers that the organizations face if politicians are given the opportunity to interfere.
- Colombia as a Nation-State does not have a maritime mentality due to its historical background as a nation developed under an inland economy.
- Colombia does not include maritime national interests in its priorities of national interests. Survey results suggest that management of maritime activities in Colombia developed partially due to the complexity of the Nation-State’s political and cultural environment.
- Answers to the survey by Naval Officers identify a maritime mentality that idealizes the sea under military values of honor, duty and country. The environment of Colombia makes people of the Naval organizations unique and protective of a country without a maritime consciousness. Naval organizations are considered optimal under the current Nation-State mentality and the instability of the nation’s environment.
- Foreign services focus on security issues at sea that determine the role of maritime organizations. This shapes their future and produces the desired results in their changing and active environments. It also creates a cohesive culture to support their missions.

- Chile, Japan and the United States fuse their Maritime Authority and Coast Guard services to provide: (1) safety; (2) law enforcement; (3) environmental protection; and (4) national defense as multi-mission agencies. This combined structure gives the organizations a unique nature that defines the essence of the services as: (1) humanitarian and law enforcement agencies; (2) regulatory and operational agencies; (3) Armed Forces and federal agencies; and (4) domestic and international agencies.
- The Colombian Maritime Authority and Coast Guard Service are best characterized as machine bureaucracies. By contrast the other countries services more closely resemble professional bureaucracies.
- The social and political environment of Colombia produce uncertainties that generate protectionism that resists restructuring Naval organizations by political actions. The concerns derive from social perceptions regarding fraud and bribery in organizations with influence of political parties.⁸²
- Naval organizations with similar functions that manage maritime activities within Colombia's maritime national interests are potentially exposed to organizational problems such as: (1) choice of purpose, (lack of role clarity, who manages? Who operates); (2) molding the organization identity (public service maritime safety and defense organizations?); and (3) unending re-definition of what needs to be done within maritime activities.⁸³
- Colombia's success in the management of its sea resources up until this time has been the result of the dedication of the people of its maritime organization. In the future this key success factors should include the support of the political actors of the nation.

B. OPTIONS

To include the common parameters (See Table 14) in restructuring the Naval organizations that manage maritime national interests, two initial strategic management

⁸² "A study by Fedesarrollo(developmentfederation)and the General Comptroller in 1994 revealed that the most common corrupt practices in Colombia are fraud, bribery, illicit contracting, and document alteration. In addition to that Cepeda, presents the results of a survey conducted on the perception of the Colombian public regarding corruption. The results are that 54 percent of the people thinks that the problem is very widespread and 28 percent that the problem is widespread. This suggest that the level of corruption in Colombia is high." Hernando Wills Velez, *Effects of the War on Drugs on Official Corruption in Colombia*, Master's Thesis, Naval Postgraduate School, December, 1995, p. 77.

⁸³ Roger D. Evered, "Strategic Management," class notes. April 10, 1997.

options are presented. These options have the following premise: There is “no best way” to create a strategy, nor is there “one best form” of organization,⁸⁴ however, some ways are better than others. The following options outline possible patterns of actions.

Any chosen strategy should include a pattern of decisions and actions that will determine objectives, purposes, or goals, and produce the principal policies and plans for achieving those goals. The strategy must define the range of jobs the maritime institution is to pursue, the kind of service and human organization it intends to be and the nature of the service represents to Colombia’s maritime national interests.

Option 1: Fuse the Maritime Authority and Coast Guard Services Under a “Consolidated Strategy”

This alternative suggests the fusion of the two Naval organizations, if the social and political conditions improve, under the assumption that the essence of the organization includes commitment to maritime safety topics as:

- Humanitarian and law enforcement functions
- Regulatory and operational functions
- Armed forces and federal functions
- Domestic and international agencies functions

Possible initiatives to achieve enhance management in the maritime activities:

- With the use of Nuechterlein matrix quantify the actual priorities given to maritime national interests to have a clear assessment of their importance.
- Fuse both organizations to become the Colombian Maritime Safety and Coast Guard Agency.

⁸⁴ Henry Mintzberg and James B. Quinn. *The Strategy Process. Concepts, Contexts, Cases*. Englewood Cliffs: New Jersey: Prentice Hall, 1996, p. xi.

- Set a maritime vision of what the organization will seek based on the priorities given to maritime national interests in Colombia.
- Perform internal and external environment assessments under SWOT (Strengths, weakness, opportunities and threats) analysis to Colombia's maritime activities to determine the actual capacities context of the nations Sea economy.
- The new organization must determine goals in order to achieve projected vision. The objectives must consider people, tasks, technology, structure and operating mechanisms under the Navy committed to be public organization specialized in maritime safety.
- The previous goals must focus in maritime safety areas that lead to enhance management of maritime activities.
- The fused organization must influence the priorities given to maritime national interests by encouraging the use of the sea to bring social and economic prosperity to the nation. The influence must be directed toward generating political actions to encourage commitment of government in supporting new programs in marine safety.

Option 2: Restructure The Maritime Authority and Coast Guard Service under a "Coexistence Strategy"

This alternative suggests not fusing the actual Naval organizations. In this option both organizations restructure to coexist under a coherent and coordinated effort to strategically manage maritime safety issues. The option generates a creative tension⁸⁵ to manage maritime activities within the complexities of the Colombian political and social environment. The strategy must envision a desired leadership position related to maritime security and establish criteria within the organizations to manage maritime activities. Safety issues create the basis for coexistence. Status quo is not an option, the organizations must transform to meet the present and future challenges.

⁸⁵ "Creative tension comes from seeing clearly where we want to be, our *vision*, and telling the truth about where we are, our *current reality*." Peter M. Senge, *The Leader's New Work: Building Learning Organizations*. Mintzberg and Quinn, Ibid., p. 414.

Possible initiatives to achieve a dual coexistence strategy are:

- With the use of Nuechterlein matrix quantify the actual priorities given to maritime national interests to have a clear assessment of their importance.
- Set a maritime vision with a major shared vision of what the organizations will seek based on the priorities given to maritime national interest in Colombia.
- Perform internal and external environment assessments under SWOT (Strengths, weakness, opportunities and threats) analysis to both organizations to determine their actual capacities in managing maritime activities.
- Focus management process in both Naval organizations to commit to become leaders and champions in maritime safety activities in within the set priorities of maritime national interest.
- Communicate the value of being committed and enrolled in maritime safety management to other agencies engaged in maritime activities. Compile and publish the regulations that encourage this commitment using consensus of all entities involved in maritime activities.
- Create a training center to educate and prepare people in maritime safety activities that would only be used in the Maritime Authority and Coast Guard services under the Navy. The creation of a specialty within the navy only educated and trained in Maritime Safety reinforces the key success factors of both organizations: its people.

C. BENEFITS

The benefits that result from the implementation of either option one or option two include the following benefits:

- Duplication of functions will be avoided, thus giving opportunity to specialize the organizations in maritime safety activities.
- Human resources of the organizations will be better integrated into the missions of the organizations by having a shared vision.

- Presents an alternative way to determine the priorities of the maritime national interests.
- Through the options presented economic resources can be maximized by minimizing duplicity of functions.
- Specialized skills and knowledge may be gained and retained by the organization.
- More favorable perceptions from the stockholders may be generated that will influence the dormant Maritime consciousness of the nation.

D. RECOMMENDATIONS

If feasible, use this study to:

- Guide policy makers of government agencies involved in maritime activities to set priorities of maritime national interests.
- Suggest alternative management processes to enhance the strategic management of Colombia's maritime national interests.

Based on the results of the surveys and the analysis of the organizations studied, further investigation is suggested in the following areas:

- Implement an economic analysis to determine the percentage of the GDP resulting from Colombia maritime activities.
- Determine the priorities of maritime national interests using a survey of Colombian government agencies, using the Nuechterlein matrix.

APPENDIX A. DESCRIPTION OF VALUE AND COST/RISK FACTORS

Value Factors

- **Proximity of Danger:** Defined as the distance within the jurisdictional waters applied to defense of the Nation-State. It can only be applied to defense of the sea and favorable sea interests. It is not applied to the sea economy or maritime ideology because it has little to do with geographical limits
- **Nature of Threat:** It can affect any of the maritime national interests. For example it can be graded due to proximity of adversary forces in disputed waters (defense). Valued by presence of foreign vessels in jurisdictional waters (Sea Economy). Valued by the consequences of not fulfilling international sea conventions and the new law of the sea (Favorable Sea Interests). It may affect maritime ideology when there is disregard of international norms.
- **Economic Stake:** Affects the sea economy and favorable sea interests, especially if the well-being of the Nation-State depends on maritime activities.
- **Sentimental Attachment:** Affects the basic maritime national interests depending of the maritime mentality of a Nation-State.
- **Type of Government:** It affects all the maritime national interests depending how much the government of a Nation-State wants to have maritime power.
- **Effects on the balance of Power:** It is the change in political changes in various parts of the world especially in maritime power and related maritime activities that could affect the feeling of security, and economic well-being of a nation-state.
- **National Prestige at Stake:** Related mainly to the nation's prestige if the maritime national interests do not support the nation's well-being and are not able to respond to compromises acquired with the international community.

- **Policies of Key Allies:** Affects mainly the favorable sea interests if the nation-state depending on the international compromises signed by the nation-state in the regional and international community.

Cost/Risk Factors

- **Economic Cost of Hostilities:** Costs that the nation-state will incur if hostilities could result in defense of the sea. Such hostilities may be trade embargoes or economic sanctions in maritime activities.
- **Estimated Casualties:** If hostilities occur is the estimate of the people required to defend the maritime national interest.
- **Risk of Protracted Conflict:** Depending on the adversaries it is a factor that the nature of the conflict must consider with respect to the maritime national interests. Maritime border disputes are included in this risk.
- **Risk of Enlarged Conflict:** This factor mainly based on good intelligence of the adversary to determine the concerns and interests in a planned intervention against maritime objectives.
- **Cost of Defeat:** This factor links to the previous considerations but adds another element: Not having an adequate naval power to defend maritime national interests.
- **Risk of Public Opposition:** The risk to be calculated in a democratic society according to the support the society gives to confrontations. Usually public opinion supports a limited war but gets impatient when it does not reach a rapid conclusion.
- **Risk of United Nations Opposition:** Condemnation by other states when the issue is addressed by the United Nations, it is a cost that decision makers must calculate before using Naval power.
- **Risk of Congressional Opposition:** In democratic societies the party that is in power always takes into account the political price they will pay if the confrontation turns to be unpopular or a failure.

APPENDIX B.
SURVEY QUESTIONS ADDRESSED TO NAVAL OFFICERS.
(ACTIVE AND RETIRED FLAG OFFICERS, ACTIVE DUTY CAPTAINS)

Señor Almirante:

Si Usted prefiere por favor envíe sus comentarios grabados en un cassette.

[If you prefer, please record your comments on a cassette.]

1. Considera Usted que el Gobierno Nacional ubica la Autoridad Marítima Colombiana (DIMAR) en forma eficiente ? (Dependencia orgánica del Ministerio de Defensa Nacional agregada a la Armada Nacional).

[Do you consider that Government efficiently places the Colombian Maritime Authority? (Organic dependence from the Ministry of Defense aggregated to the Navy)]

2. Considera Usted que el Gobierno Nacional ubica al Cuerpo de Guardacostas (COGAC) en forma eficiente ? (Dependencia orgánica del Jefe de Operaciones Navales)

[Do you consider that Government efficiently places the Coast Guard Service? (Organic dependence from the Chief of Naval Operations)]

3. En países como Estados Unidos, Japon, Chile, Peru y Argentina los servicios de Guardacostas estan bajo la responsabilidad de la Autoridad Marítima. En el caso de Chile la Autoridad Marítima depende de la Armada. Considera Usted que en Colombia podría utilizarse alguno de estos esquemas organizacionales?

[In countries like United States, Japan, Chile and Argentina the Coast Guard Service is under responsibility of the Maritime Authority. In the case of Chile the Maritime Authority depends of the Navy. Would you consider using in Colombia the one of these organizational schemes?]

4. Cuál de estas opciones considera como la mejor alternativa para administrar las actividades marítimas de nuestro país, considerando las fortalezas y debilidades de nuestra organización política y administrativa. Por favor explique.

- a. DIMAR orgánicamente dependiente de la ARC.
- b. COGAC orgánicamente dependiente de DIMAR.
- c. Mantener la actual organización.
- d. Otra alternativa. (Por favor especifique)

[Which of these options do you consider best for managing the maritime activities of our country, considering the strength and weakness of our political and administrative organization. Please explain.

- a. Maritime Authority organic dependence from Navy.
- b. Coast Guard organic dependence of Maritime Authority.
- c. Maintain actual organization
- d. Other alternative. (please specify)]

5. A nivel Gobierno que cambios considera necesarios desde el punto de vista organizacional, para lograr una administración estratégica de las actividades marítimas dentro de los intereses marítimos Colombianos?

[At Government level what changes would you recommend that might improve the strategic management of maritime activities within Colombia's maritime national interests?]

6. Qué otro aspecto considera debo tener en cuenta para este ejercicio académico.

[What other aspect do you consider I should cover in this academic exercise?]

APPENDIX C. EXTRACTS OF ANSWERS TO THE SURVEY

The actual problems regarding to narco traffic and narco guerrillas, justifies that the Coast Guard organization be under the Navy, due that these types of problems have more to deal with national security issues than law enforcement related to the Maritime Authority.

The national vocation has never been to use the sea resources in an adequate way.

Another important aspect that we should have in mind is to do educational campaigns in short, medium and a long term, addressing the importance of maritime power for development of the country, including the policies of environmental protection.

Navy and Maritime Authority organizations, are the thrusters and guarantors of national maritime matters, and is where the maritime consciousness of the nation lies and this must be made valued.

To move the maritime authority apart from the navy means to politicize and not continue to operate it, with all the negative consequences that will infer to the Navy.

We must nourish the maritime consciousness at a national educational level, with the purpose that all sectors of the nation will develop and protect it. The future of the new generations will need of the living and nonliving resources of the sea.

First we must develop a real conscience of the importance a Maritime Authority has in development of a nation. Second we must have the sufficient capacity to influence the political classes, so we the ones who know about the sea, direct the courses that the nation should follow from the organizational point of view: the creation of a Marine Ministry.

Develop educational program at all national levels to form a maritime consciousness in the nation, with leadership from the navy.

The Coast Guard is under a stage of development and growth that requires active support of the Navy with infrastructure, personnel, experience and operational capacity.

The government policies must be made to develop an effective maritime power.

At government level leaders must set up strategic management for the development, exploitation and preservation of the marine environment. Once there is a broad and strategic vision of what they want about the maritime national interests, the necessary restructure must be done in the organizations according to the results of the exercise.

Actually how the Maritime Authority is organized does not permit to project itself as an autonomous institution.

The academic exercise must consider the interrelation that must exist between different government agencies that have to deal with maritime activities looking to develop consciousness at a national level of the importance of implementing maritime power with all the social and economical benefits that it brings to Colombia within the international context.

The way the Coast Guard is operates implies giving it a navy type management: lots of discipline and most important of all excellent preparation and rectitude of Naval Officers.

We have never had a vision of the sea or what it represents for us because mother nature has given the nation all the types of climates, products etc., during all seasons of the year, meaning that we do not have anything to do at sea since all the natural resources are inland.

The navy is the only institution that has experience to handle and manage maritime forces.

The Nation-State should create a Marine Ministry to manage the importance the sea has. It should gather all the agencies that have relation to it, so policies required for the strategic management will naval power and contribute to develop sea power.

If the mentality of our leaders does not change, I see very difficult to make variations that will give the navy an adequate strategic value.

We have to establish and encourage maritime national interests at all levels of power in the nation so that they will include them in their strategies and permanent objectives to influence and maintain them.

We must give special attention to protection of marine natural resources. The economy and development of the nation must be considered vital with them.

The countries you mention are many years ahead of us in maritime development. They recognize the strategic value of a navy. Unfortunately in Colombia we have not created and wake a maritime consciousness, nor in high levels of government and citizenship overalls. All in an inexplicable way with two coasts in each ocean have an inland mentality.

We have a nation submerged in public disorder that does not think in the sea

APPENDIX D. OPERATIONAL RESULTS

Table 15. Tangible Results 1997

Material	Atlantic	Pacific
Inspected Vessels	2,018	1,005
Sanctions Imposed	73	122
Fisheries	0	8
Infractions Submitted to Port Captains	30	12
Seized Cocaine	941.9 kg	3.7 kg
Seized Marijuana	0	3.7 kg
Chemical Precursor 55 Gal Drums	1 lb.	1 lb.
Weapons Seized	1	39
Ammunition Seized	0	78
Arrested People	18	24
Search and Rescue	13	14

Table 16. Operational Results 1995-1996

Material	1995	1996	Difference	%
Inspected Vessels	4,846	7,717	2,871	59
Sanctions Imposed	117	294	177	151
Fisheries	26	57	31	119
Infractions Submitted to Port Captains	46	196	150	326
Seized Cocaine (kg)	13.75	24.6	10.85	78
Seized Marijuana	0	175	175	100
Chemical Precursor 55 Gal Drums	0	80	80	100
Weapons Seized	20	23	3	15
Ammunition Seized	578	281	-297	-50
Arrested People	31	121	90	290
Search and Rescue	21	22	1	4

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